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Richard T. LaPiere, Consulting Editor

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Sociology

by RICHARD T. LAPIERE

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STANFORD UNIVERSITY

FIRST EDITION

McGRAW-HILL BOOK COMPANY, INC.

NEW YORK AND LONDON

1946

SOCIOLOGY

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PREFACE

At times like the present, when the crises of social change seem heightened and there is great public concern with social problems and predicaments, people are inclined to become preoccupied with immediate and transitory matters and to grasp frantically at ideological cure-alls. At such times the spectacular promises and predictions of politicians and propagandists, of fortunetellers and astrologers, and of others with something to sell are likely to be accorded undue attention, and the undramatic findings and opinions of students of human affairs are in danger of being overlooked. At such times it is therefore especially desirable for sociologists and other social scientists to make every effort to publicize their findings about social life. For the views of the lay interpreters of human affairs are dangerous romancings that lend false hope and flimsy grounds for social action.

The sociological understanding of human society is still far from complete; for sociology is young even as sciences go, and society is a vast and complex subject. But the accumulated knowledge of sociology can already do much to counteract the power of ignorance. What the author has tried to do here is to present in simple language and in terms of our times what sociologists have so far discovered about social life in general and about our own society in particular.

The central theme of this presentation may be variously designated as "interactional," "operational," or "dynamic." Society, it is held throughout, is process rather than thing, a moving rather than static structure, and one that involves many various and interdependent factors. In order to demonstrate the dynamic character of all social practices an analysis is made of forms of social life in terms of their contexts; and the concept of function judgments, as distinct from the specific value judgments that the members of each society apply to their particular social forms, is employed. In order to show the multiplicity and interdependence of the factors that contribute to the making of social phenomena a systematic analysis is made of the totality of the social system; and the modern scientific concept of the interactional and variable character of all forces, social and otherwise, is substituted for the lay idea of simple cause and effect.

In this approach to the study of society it has been necessary to consider the conditions under which and the processes by which society

develops and to devise a way to break down for analytical purposes the whole of society into functionally interdependent components. The result is, the author thinks, a new mode of dealing with sociological materials. The author hopes that it will prove to be an aid to the understanding of sociological concepts, of the nature of society in general, and of the reasons for some of the social predicaments of our disordered times.

RICHARD T. LA PIERE

STANFORD UNIVERSITY, CALIF.

August, 1946

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Sociology

Part I

An Introduction to Sociology

Chapter I

FROM FOLKLORE TO SOCIOLOGY

THE term "sociology" was first used nearly a century ago by the French savant Auguste Comte to designate the application of the scientific method to the study of human societies.¹ In his day, as in ours, scientific investigation, as distinguished from biased and prejudicial speculation, was yielding information about natural phenomena that made possible a more effective use and control of nature. Science was helping men to build safer bridges and ships, to navigate the seas with greater confidence, to secure a higher return from the cultivation of the soil, and to alleviate some of the many disabilities and diseases that afflict the human body. In his day, as in ours, many men felt that their societies were less effective and less efficient than they should be. The majority of men were poor, ignorant, and improvident. Government, professing to aid them, was commonly but a tool for the satisfaction of the few, for the self-glorification of the politicians, and for the exploitation of the masses. Under such government, crime was a flourishing and profitable occupation. Every nation was torn by internal dissensions that lowered the efficiency of the nation as a whole; and wars between nations wiped out what little gains men had made during the periods of peace. Even the knowledge acquired by the scientific method was being put to the making of personal profits rather than to the improving of human welfare.

Poverty, political chicanery, economic exploitation, crime, class, race, and other group conflicts, and wars between states were not new to human experience. But the contrast between man's increasing ability to direct nature to his own ends and his continuing inability to manage human affairs was growing noticeably sharp. To Comte and to other

¹ For a brief statement of the life and works of Comte, see A. Hubert's article, "Comte" (*Encycl. Soc. Sci.*, vol. 4, pp. 151-153).

social thinkers of his day it seemed obvious that ignorance about society was the root of all social evil; and he believed that knowledge about society, obtained by the method then proving so fruitful in the natural sciences, would make possible the development of the good society, just as knowledge about mechanics was making possible the construction of stronger bridges.

The good society, the society in which all men work together for their individual and their common good, has not yet been realized; but the idea that scientific knowledge about society is prerequisite to any marked improvement in the state of human affairs has been substantiated as such knowledge has grown. The ultimate purpose of modern sociology is the deliberate modification of social life. Thus modern sociologists search for the underlying principles and processes of social life in the hope that, once armed with knowledge of these principles and processes, men will be able to mold their societies more nearly to their own desires. Today, as in Comte's time, sociology is an attempt to secure knowledge that will ultimately be useful in the shaping of human affairs. But whereas Comte and his contemporaries expected quick results from the application of the scientific method to the study of societies, modern sociologists know that even now no more than a beginning has been made.

That Comte underestimated the difficulties of making truly scientific studies of social phenomena and overestimated the effect that scientific knowledge would have upon human affairs is understandable. Although he did much to initiate sociological inquiry and is generally thought of as the father of sociology, Comte actually knew little about society. Only now, after a hundred years of fumbling effort, has sociology become what Comte thought it would be at the outset—an unbiased examination of what human societies are, how they operate, and why they come into being. For at least half of those hundred years sociologists have struggled to escape from the domination of folk ideas about social life.¹ Not until these folk ideas were tested against the facts, found invalid, and finally cleared away were sociologists able to begin to make positive contributions to our understanding of society. Until then they were preoccupied with the task of discovering what society is not, how it does not operate, and what has not brought it into being. Such negative findings are useful, but only as a preliminary to the gathering of positive knowledge. An understanding of how not to build a bridge may prevent one from trying to build a bridge the wrong way, but it does

¹For a more extensive account of this struggle, see H. E. Barnes and H. Becker, *Social Thought from Lore to Science* (2 vols., Heath, New York, 1938), especially vol. II; F. N. House, *Development of Sociology* (McGraw-Hill, New York, 1936); and J. P. Lichtenberger, *Development of Social Theory* (Century, New York, 1925).

not of itself assist in the building of a good, safe bridge. Sociology—and this is equally true of such other social sciences as economics, political science, and psychology—can now provide a great deal of data on how not to secure any desired social effect. It has only just begun to accumulate an impressive array of positive knowledge; and much more about the working of society must be discovered before sociology can serve as the basis for a social technology.

In this introduction to sociology attention will be devoted mainly to the positive findings of sociologists, and little time will be expended upon reviewing the arguments and evidences that have enabled sociologists to clear their own minds of the prejudicing influence of folk ideas about society. It may be well, however, to indicate something of the nature of these folk ideas and to recount briefly the difficulties that social thinkers have encountered in developing a scientific approach to social life.

The Fictions of Folklore.—Included in the social inheritance of every people are an assortment of beliefs about the nature of the world in which they live and a set of justifications for the particular customs and institutions to which they adhere. These beliefs and justifications provide stock answers to the questions of querulous children and occasional doubting adults. They serve as explanations for such natural phenomena as the rising and setting of the sun, the falling of rain, the birth of infants, and the death of elders; and they are given as the reasons why certain rites will bring rain and others prevent it, why a certain procedure will prevent the occurrence of disease and another check a disease that was not prevented, why the king's word must be obeyed and the beggar's may be ignored, etc. All lend a modicum of confidence and assurance to the members of the social group.

Folk beliefs and justifications are an important part of all societies and as such constitute data for sociologists. But they are no more than socially sanctioned fictions, no more and no less valid than the myth that the stork brings baby brothers and sisters to deserving children. Historically, fictions about nature have been a strong barrier to the development of scientific knowledge about nature, and in even greater measure folk justifications for social ways have delayed the scientific exploration of society. The early astronomers, physicists, chemists, and biologists were treated either as fools or as devils, since their doctrines violated the canons of "common sense," the wisdom of their elders, and the will of God. To escape persecution by organized ignorance, Galileo, for example, had to preface the report on his discovery that the world was not the center of the cosmic universe by a bald-faced lie to the effect that he, like all Christians, knew that the heavens revolved about the earth but that for some reason God in His infinite wisdom had made it appear otherwise.

More than three centuries later, the less circumspect biologists were being roundly damned for daring to suggest that man was not the special and favored creation of God. Folklore concerning physical and biological nature has in the main operated to retard the growth of scientific knowledge of these spheres and to delay its application to the satisfaction of human desires. But it has not in any great measure confused and bemused those who were, in spite of the resistance set up by the folklore, in quest of scientific knowledge.

Social Philosophy.—Folklore concerning social life, on the other hand, long delayed the appearance of any endeavor to study society scientifically. The functional value of folklore in maintaining a society need not be discussed here, since it will be treated at length in a subsequent chapter. Relevant to immediate concerns, however, is the fact that during periods of social change and turmoil the folklore provided the substance for philosophical speculation and debate; and until very recently the dogmas of the social philosophers have been mistaken, even by those who thought that they were studying society, as significant indications of the nature of society, when they have been in fact but rationalizations of a preference for things as they were or as they might become.¹

Conservatives, those who because of personal self-interest, sentimental attachment, or prolonged habituation wish to preserve the established ways, have drawn on the folklore for arguments to defend their no-change position. Radicals, those who because of personal discontent, sentimental regard for the welfare of others, or habitual negativism wish to introduce some change in the social system, have drawn on their imaginations for arguments against the continuation of existing social practices and in support of their pet proposals. The result was philosophical disputation of a sort that precluded any serious regard for the facts of social life and prohibited any recourse to impartial study of society. Out of such disputes have come the great social philosophies and many of the pages of our *Congressional Record*, but none of these disputes has yielded any real knowledge about society.

THE PHILOSOPHICAL APPROACH

Social philosophers were the predecessors of modern social scientists, and many of the problems about which they speculated are now the concern of sociologists. In twenty-five centuries of recorded philosophizing, however, all that has been proved is that the philosophical approach to an understanding of society is sterile: that one may debate the causes and characteristics of society century after century and be no further

¹For a recent attempt to relate philosophical doctrines to the social circumstances under which they arose, see B. Russell, *A History of Western Philosophy* (Simon and Schuster, New York, 1945).

along in the end than in the beginning. It is not far from the truth to say that as late as the nineteenth century our knowledge about the causes and characteristics of society was no greater than that possessed by the ancient Greeks and the Chinese at the time of Confucius. Plato was not so ponderous as Marx, Aristotle so erudite as Spencer, or Confucius so sophisticated as Westermarck.¹ But in each instance the latter did no more than restate in modern terms and with some variations a view of society that had been recorded about twenty-five centuries before.

The social philosophers did, of course, make some contribution to the development of contemporary sociology. The science of society did not spring abruptly out of nothing; like all sciences, it grew out of folklore and philosophy. But since the social philosophers were invariably either attacking or defending their own social systems, their interpretation of whatever facts of social life they found was prejudiced. Many of them were wise in the ways of men, and their observations were at times profound. All of them, however, used their wisdom and their observations to bolster up a cause, never to find "the cause" of social life itself. Thus most of what the early sociologists inherited from their philosophical predecessors was an intricately woven fabric of rationalizations, justifications for the social outlook of the philosopher, more elaborate but no less fictitious than the folk justifications for social practices.

Radicalism and Conservatism in Ancient Greece.—The Greek city-state system, of which Athens was perhaps the best representative, appears to have achieved its highest development about five centuries before the opening of the Christian Era. Many parallels may be drawn between the city-states and modern nations, so many in fact that some contemporary social philosophers are prone to look to Greek social history and philosophy for an understanding of the modern world. As it is in nations of today, government was the dominant and most inclusive agency of social life in the city-state system. The family and other kinship groupings played a subordinate role, and religion was an aesthetic rather than an ethical concern. Governments ranged and vacillated between the poles of democracy and tyranny. Wars between the Greek city-states were frequent and highly destructive. The population of each city-state was sharply divided into rural and urban and rich and poor, and there was considerable division of labor among the working classes. By 400 B.C., wars, plagues, economic parasitism, political tyranny and ineptitude, and other symptoms of social disequilibrium had become so acute that some men were losing faith in things as they were and de-

¹ K. Marx, *Capital*, translated by S. Moor and E. Aveling (Humboldt, New York, 1890); H. Spencer, *Principles of Sociology* (3 vols., Appleton, New York, 1901); and E. Westermarck, *The History of Human Marriage* (3 vols., Macmillan, London, 1921).

manding a change to something else. Of these men, some looked back longingly toward the presumed golden ages of the past, while others, according to their temperaments, looked forward either to the golden or the dark ages of the future. Representative of those among the intellectuals of Athens who hoped for a sharp and rapid change for the better was the philosopher Plato; spokesman for those who were content with things as they were, mainly the rich and politically dominant, was his disciple Aristotle. The ideas of these two men have been fundamental to all the philosophical dogmas that have subsequently arisen and may be taken as illustrative of the nature of social philosophy.

Platonic Idealism.—Plato, whose closest modern parallel is Marx, presented in his book *The Republic* a rather detailed plan for the good society. He proposed the subordination of all walks of life—economic, educational, religious, military, etc.—to the state. The family, or what still remained of it, was to disappear; infants were to be placed under state guardianship for their maintenance and education. Hereditary class distinctions also were to be eliminated, to the end that every individual would be given full opportunity for maximum development within the limits of his natural abilities: those with least ability were to become, irrespective of the positions of their fathers, members of the worker class; those with greatest ability were to become rulers—and to Plato that meant philosophers; while those in between were to become the soldiers that would be necessary for protecting the good society from attacks by societies less fully developed. Although the citizens of this society would not have equal status, each would contribute to the best of his ability to the collective welfare; and each would at the outset have equality of opportunity. Once established, the system would be self-perpetuating; for each individual would be thoroughly trained in the habits, sentiments, and beliefs appropriate to his designated social role. The special class of rulers was provided because, of course, some events would occur and some problems arise that would require on-the-spot solution. The power of the rulers would be great; but it would be used only to collective ends, for the rulers would have been educated to a high level of social responsibility.

Implicit in Plato's plan was the belief that there is nothing in the nature of the human animal that predisposes the human being to be selfish, greedy, or dishonest or that prevents him from being a loyal, righteous, and self-sacrificing member of society. Plato had great faith in the efficacy of education, which to him meant training by example and by group participation rather than verbal drilling. In this respect he is not unlike one of his near contemporaries, the Chinese philosopher Confucius, who, too, believed that men could live together in harmony and contentment if only they were taught to do so. But whereas Con-

fucius proposed that the family be the training agency (as it did in fact become in China), Plato proposed that all education be undertaken by the state.

Plato's belief that men behave as they have been taught to behave, that society does the teaching, and that, therefore, a good society will produce the kinds of human attributes necessary for its own maintenance is entirely in accord with present understanding of the origins and nature of human nature. His error, one all subsequent idealists have made, was his assumption that the good society could be brought into being. At no point did he even suggest how his planned social system was to become an actuality. The fact was that a decadent city-state system was training men to live in the ways of a decadent city-state system, the very system that Plato proposed to replace. How to train them to behave in those ways necessary for maintaining the proposed Republic until the Republic had become an actuality and how to make the Republic an actuality until men had been trained to behave in the ways necessary for establishing the Republic were problems that Plato did not recognize, or at least did not face, perhaps because he, like many philosophers after him, could find no solution to them.

Plato's plan was idealistic in that it presented a humanly desirable end without providing a feasible means by which to achieve that end. Moreover, that end, the Republic, was at best a crude sketch of a workable social system rather than an actual blueprint for one. Like all idealists, Plato vastly underestimated the complexity of social organization, the complexity and inexactitude of the educational processes, and the subtleties of the individual human being. In his plan, everything was to go according to plan, and men were to behave like a group of well-trained seals. But in social life nothing ever goes quite according to plan, and men invariably evidence sufficient individual initiative and originality to prove that they are men rather than seals.

Aristotelian "Realism."—Plato was a radical philosopher, for he strongly disapproved of the then-current state of men's affairs and proposed a revolutionary substitute for the malfunctioning city-state system. Aristotle broke with his master and went to the opposite extreme. The social philosophy that he developed was in support of the *status quo* and was, hence, conservative in character. Aristotle's philosophy appealed to the political and economic leaders of Athens, for it justified their position and conduct; Plato's idealism, on the other hand, had appealed mainly to the humble, who had had no voice in the conduct of social affairs.

Because his philosophy flattered and reassured the important men of his day, Aristotle was highly regarded in Athens; and because he was an inveterate collector of factual evidences, he has since been acclaimed as the father of modern science. The authority of his name, if not his facts,

did indeed serve a useful purpose in the early stages of the development of the sciences. For when, in the latter Middle Ages, men here and there began to examine natural phenomena rather than simply speculate about them, they found in the writings of Aristotle a valuable precedent. See, they could say, when the Church charged them with heresy, the great Aristotle went out onto the beach to collect seashells so that he might learn of the fishes in the seas; it follows, therefore, that we may go into graveyards and collect bones so that we may learn of the structure of man. So valuable was Aristotle's reputation that he may justly be considered the godfather of modern science. But he can hardly be called the father; for he used the data that he collected only to prove preconceived notions, notions that were mainly derived from the folklore; and, although this use of factual evidence is still in vogue, it is far from scientific. The proper name for it is pseudo science, the use of facts to bolster up a fiction.

Aristotle's social philosophy began with the observation that man is a social animal, *i.e.*, that man is invariably found living in association with his kind, an observation that must have been a truism even in Aristotle's day. To this observation he added the assumption that social life is a direct expression of the inherent nature of man. He then attempted to explain the forms of man's social life in terms of presumed natural impulses and characteristics: Following a natural inclination to take a mate, man institutes family life. Following other natural inclinations, men form large and complex groupings, of which the ultimate is the state. In and through these various groupings, the individual satisfies his need for association with his kind and expresses his inner nature. Since some men are by nature inferior to others, they serve in the capacity of slaves to these others. Since some men are by nature fitted to be leaders, they rise to positions of leadership. And, finally, since all things social are natural, even as the rising and setting of the sun is natural, a society will continue on its inevitable course in spite of the pleas and plans of men who believe themselves superior to nature. In modern terms, Aristotle was a biological determinist, since he believed that things were as they were because men were born what they were.

Aristotle supported his doctrine of the biological basis for and hence inevitability of things as they were by some rather elaborate descriptions of things as they were, a practice that was later refined by Francis Galton and his disciple Lewis Terman and by William McDougall and all his followers.¹ The whole of human history disproves the thesis, for things

¹For a summary of McDougall's instinct concept, see "William McDougall's Doctrine of Social Psychology" by H. E. Jensen (*J. Soc. Phil.*, vol. 4, pp. 206-219, 1939); and for a rehash of the Galton-Terman thesis, see *Heredity and Environment* by G. C. Schwesinger (Macmillan, New York, 1933).

have never for long remained as they were. In the course of time masters have become slaves, and slaves have become masters; leaders have been dispossessed by men who were humble followers; and societies that were great have given way to societies that were weak and insignificant. The Aristotelian doctrine of the inevitability of things social has nevertheless been readily accepted both in ancient Greece and modern America by those who have profited most by things as they were. For if a thing is inevitable, it is *ipso facto* beyond criticism. Thus if poverty is inevitable, the rich need feel no blame for the lot of the impoverished and would be foolish to attempt to improve it.

Mainly because the Aristotelian thesis is a useful defense of the conservative position regarding society, conservatives have seldom bothered to examine its logic: A society exists in its particular form because of man's inherent nature, as is evidenced by the fact that men live together in a society of that particular form. The only evidence that Aristotle advanced to prove the natural basis for society was the existence of society; he explained society in terms of itself. If one were to apply Aristotle's line of reasoning to some of the more pressing sociological concerns of the present, one would arrive at such unhelpful conclusions as that peoples of different racial origins do not live peaceably together because they are by nature antagonistic to one another and that the present economic system does not produce all the goods it is technically capable of producing because men are by nature selfish, profit-seeking, and unconcerned with the welfare of others. That racially different peoples are naturally antagonistic is proved by the fact that they do not live peaceably together; and that men are naturally selfish, etc., is proved by the fact that they do not work together efficiently to produce all the goods they would like. The fallacy of such reasoning should be obvious. But the wish to believe has been so strong and the folklore so tenacious, especially when it has been sanctioned by great philosophers, that until the third decade of the present century most social scientists, including sociologists, accepted conclusions about the causes of society that had been arrived at in this specious manner.

Roman Legalism.—Aristotle's confident assertion that Athenian society could not be changed because it sprang directly from the nature of man did not prevent that society from wearing away into oblivion. Nor did his doctrine prevent the Romans, who were in Aristotle's time a rather inconspicuous people, from developing a complex culture, building invincible armies, and establishing a vast empire. Yet when time and circumstance brought a tarnish to the glory that had been Rome's and when dissensions arose among the people of Rome, the Roman philosophers turned back to Aristotle's reasoning for an explanation of the deplorable state of Roman affairs.

For some reason, Roman society seems to have produced few original social philosophies, although there were many men of letters, some of whom wrote of their times with great perception. It is possible that, because of the character of the social system, those Romans of the caliber to become philosophers became senators instead and, rather than inscribing their views for the edification of future scholars, expounded them to the deaf ears of other senators. At any event, about all that was original in Roman social philosophy was the justification of law on the grounds that man is by nature of evil and selfish intent and must be forced into behaving in the ways necessary for social life. This concept of the reason for one aspect of society—the legal and judicial machinery—was of course a complete reversal of the Aristotelian view, for it made man by nature a nonsocial creature. But the logic by which the Roman legal philosophers arrived at their doctrine was comparable to that by which Aristotle arrived at his; thus as proof that men are by nature evil and must be forced into being good they advanced the fact that unless laws are enforced men will break them.

Centuries later this same thesis was arrived at by the same sort of reasoning and made into a doctrine of political leadership by the Florentine Niccolò Machiavelli, whose name came to be synonymous with political trickery but who merely put into writing what everyone in his day believed and who advocated what every successful politician practiced. His doctrine has recently been revived and given the more favorable appellation of *Realpolitik*.

Scholasticism.—While the Roman Empire was entering its decline, there was evolving in and around Palestine a complex of folklore that was to serve ultimately as the basis for a whole new trend in social philosophy. This complex was compounded from the myths and legends and hopes and aspirations of the Hebrew people and from comparable social elements that were dropped in passage by the various peoples who moved to and fro through the Palestine area, then a sort of crossroads for the travelers, merchants, and warriors of all the Mediterranean. It focused finally on the person of Jesus of Nazareth; and in time it became systematized into a religion that spread westward into Europe. Christianity has had, perhaps, as profound and prolonged an effect on the life of Western peoples as Buddhism has had on the peoples of the East. Peculiar to Christianity, however, was the fact that it did not remain simply a system of religious faith and practices but was soon extended to include various political and economic doctrines and was used to enforce and perpetuate specific forms of social life. Of the doctrines that came to be attached to Christianity the most significant for social philosophy was that which evolved within the framework of the medieval Church and

which was systematized and rationalized by the scholastics of the Middle Ages.

The Roman Empire had slowly and painfully disintegrated, in part because of internal dissensions and inefficiencies and in part as a result of inroads by barbarians. For some centuries the only thing that had held the varied and militant peoples of Europe together was Christianity, and this tie had been a tenuous one. Around 1000 A.D. a variety of factors began to introduce a degree of economic unity into the life of the feudal peoples of Europe and to necessitate some sort of political unification of them. A violent struggle for power then arose between the leaders of the Church, who advocated the establishment of a Holy Roman Empire, and various feudal lords who desired to cut out for themselves secular kingdoms. Justifying political rule of the people of Europe by the Church hierarchy became the task of the more learned of the priests. They worked wonders of verbal magic; and from their efforts there eventually emerged a social philosophy known, because of its scholarly origins, as scholasticism. Of the scholastic philosophers Thomas Aquinas was undoubtedly the greatest because he was the most skillful; with his system of magic anything that the Church might do or say was "true," no matter what evidence there was to the contrary. His doctrine was the antithesis of science: it was authoritarian, whereas science is experiential; it was final, whereas science is constantly expanding; it was absolute, whereas science knows only relatives. That the scholastic dogma was tied to Christian religion was a matter of historical proximity, for it might just as well have been tied to Islam or even to ancestor worship; but because it was tied to Christianity, the death of scholastic dogma almost brought an end to faith in Christianity itself.

Scholastic social thought is at basis very simple and can be disposed of briefly. That man possesses a soul and that upon death man's soul proceeds to another realm is a religious concept that is widely held. It is faith that cannot be disproved, for the existence of the soul and of a hereafter is beyond verification. But the scholastics were not content to restrict religious faith to unverifiable concepts; they stretched it to encompass all the world of man, much of which has since proved subject to scientific investigation. They propounded the Biblical thesis that man is a special creation of God, a creature made in the image of God and entirely dissimilar and unrelated to the animals. They then advanced the thesis that this God-like creature is subject to no laws but those of God, and that the Churchmen are God's earthly representatives, empowered by Him to interpret His decrees and to enforce His will. According to the Church, the social system that was then in effect—one that supported the Church—was the divinely sanctioned one; consequently anyone who thought to propose a change in the *status quo* was

a heretic, and anyone who might actually manage to effect a change in that system would have his soul damned to everlasting hell. Never has the mind of man devised a more conservative philosophy than this, and never has a philosophy proved more difficult to dislodge.

In view of the fact that societies have been constantly changing since the period of the Middle Ages, it is clear that either the scholastics were wrong or else heaven is a sparsely populated place, inhabited by those few souls who happen to have had their earthly manifestation during the Middle Ages, to have lived in western Europe, and to have had the good fortune to know and to adhere to the divinely sanctioned ways. And, if the scholastics were correct, hell would be jam packed with politicians, militarists, scientists, and technicians; for it was through the agency of such men that the rule of the Church was finally broken and the scholastic thesis that nothing social can be changed was thoroughly disproved.

THE BEGINNINGS OF SCIENCE

The chaotic social conditions of the period that historians designate the Reformation, during which secular authority gradually superseded the authority of the Church, produced many men who were discontented with things as they were. Some of these turned to examining the nature of the physical and biological world; bit by bit they freed their minds from the Church-sanctioned folklore and began to apply the scientific method, which has yielded such rich returns in the centuries since, to the study of nature. Those who attempted to examine the character of social life were not so fortunate. For one thing, the Church fought them with greater fervor and cunning; and where the Church left off, the fight was taken up by Calvinist and Lutheran theologians. For another, scientific study of society encounters two difficulties that are not ordinarily met in the study of physical and biological phenomena: (1) the student of society is himself trained in the thoughtways of his particular society, so that it is exceedingly difficult for him to approach the study of society with a free and unbiased mind; and (2) society is an intangible that is perpetually changing. Whereas the number of bones in the human body remains constant, corpse after corpse, the outward form of a social institution changes generation after generation. What then is the true character of this institution? what are its laws? and what can possibly be the cause of so unstable a phenomenon?

The early students of society were further handicapped in that all previous discussions about society had been in the philosophical mode and in that they themselves were more interested in proving the feasibility of some program of social change than in ascertaining the facts of social life. From time to time a social thinker attempted to apply the scientific method, but invariably the philosopher in him won out against the

scientist. Most nearly scientific, perhaps, of all those who prior to the present century wrote on the origin and nature of society were Charles de Montesquieu and Auguste Comte.

Climatic Determinism.—Montesquieu, an eighteenth-century French intellectual, was perhaps the first important social philosopher after Plato to seek in a variable factor the explanation for society, which is itself a variable.¹ Europeans of his day had become aware of the fact that the other peoples of the world adhered to strange and wondrous customs, no two peoples having quite the same social practices. But Europeans had retained the provincial view that their own ways were right and all others wrong. Montesquieu, displaying a rare degree of detachment from the views and values of his contemporaries, observed that "right" is a matter of social definition and varies from people to people. It was, for example, in some places considered right—*i.e.*, it was socially sanctioned—to have slaves and numerous wives; but it was considered wrong—*i.e.*, it was socially prohibited—in others. The European moralists of Montesquieu's day brushed off such contrasts in social practices with moralistic condemnation of those peoples who sanctioned having more than one wife; but Montesquieu was not convinced of the universal validity of European morality. Here was a fact: different peoples have different social practices, and each people believes its own ways to be the right ones. Now why do different peoples have different ways? Or, to put the problem more directly, what is the variable that causes each people to have its own particular kind of society?

In attempting to find an answer to the latter question, Montesquieu proceeded, perhaps inadvertently, to make the closest approach to a scientific examination of societies that had been made in all recorded history. He assembled what facts were then available about the social systems of the various peoples of the world and from these facts made whatever comparisons and classifications that he could. If only because his facts were limited and were necessarily diluted with lies of sailors and prejudiced reports of missionaries, his conclusions were far from valid. He thought that he found a consistent relationship—a high correlation, it would be termed today—between the climate of the region that each people inhabited and the character of their social system. Putting together this faulty observation and a wholly erroneous concept of the life processes, drawn from the physiologists of his day, Montesquieu arrived at the folkloristic conclusion that climate is the principal determinant of social life. Thus he explained the existence of slavery among some peoples, for example, on the basis that heat relaxes the fibers of the body and makes men loath to work, so that in hot countries the

¹ C. L. Montesquieu, *The Spirit of Laws*, translated by G. Prichard (G. Bell, London, 1894).

lower class must be forced to work or they will not produce those things necessary for maintaining the society. Contrariwise, cold contracts the fibers of the body and makes for great energy; thus in cool regions slavery is not necessary and therefore does not appear.

Montesquieu's attempt to apply the scientific method to the study of societies resulted in conclusions little better than those of the speculative philosophers. His fault was one that has plagued sociologists down to the present time—the fault of impatience, of an overpowering desire to know the truth and the whole truth about social life all at once.¹ Natural scientists also suffered from this same sense of urgency, but in time they learned that knowledge is hard to come by and that there is no short cut to scientific understanding of any phenomena. Had Montesquieu devoted his life to an actual searching for data on the social systems of various peoples, he would soon have discovered, among other things, that many peoples who live in hot climates do not practice slavery; and he would ultimately have contributed a little to our store of knowledge about societies. But in his day, and for long thereafter, it did not occur to anyone to go out and observe and record the social life of the various peoples of the world. And until many men had devoted themselves to the collecting of data on social life, conclusions regarding the nature of society, however cautiously arrived at, were all of doubtful validity.

If, as Montesquieu believed, the characteristics of any society were determined by the climatic conditions under which it had developed, those characteristics could not with impunity be modified. Thus should slavery be abolished, the populations of hot regions would perish, victims of their heat-induced distaste for labor. Within any given society, what existed would therefore be the natural state of affairs; and if anyone found that state of affairs distasteful, his only recourse would be to move to another climate, one that had induced the development of the sort of social system that would be congenial. For man cannot change the climate of a region; and a social system, once it had been fully adapted to climatic conditions, would be little subject to change. Thus like Aristotle, but by an entirely different route and presumably for quite different reasons, Montesquieu arrived at the very conservative conclusion that what is must be. His theory offered no hope whatever for the remaking of European society. And yet the social life of Europe continued to change and to do so with increasing rapidity, while the climate of Europe remained constant.

Comtian Positivism.—Comte, who followed Montesquieu by nearly a century, had the advantages of more highly developed natural sciences and a social milieu that was favorable to the scientific way of thinking.

¹ P. A. Sorokin's *Social and Cultural Dynamics* (4 vols., American Book, New York, 1937, 1941) provides an excellent example of what this desire can lead to.

By the close of the eighteenth century the practical consequences of the natural sciences were becoming evident, French social thought was in ferment, and the idea that man could be master of his destiny had reached even the people of colonial America. As has already been indicated, Comte predicted that man would become master of his social destiny as soon as he had developed a science of society. To justify this prediction, Comte posited what he considered to be one of the basic laws of social history: that man goes progressively through three stages of mental (conceived as social rather than biological in origin) development— theological, metaphysical, and, finally, scientific. So far as his thinking about natural phenomena was concerned, man had reached the scientific stage; and having arrived there, he had acquired great control over nature. Man's thinking about society, however, was still in the metaphysical stage. He pondered and speculated about society, but he had not yet learned to examine society with sufficient detachment to discover its laws. Fortunately, though, the metaphysical stage had almost run its course; and mankind was on the threshold of the scientific stage and, therefore, of a new era in human welfare. Comte believed that his *The Positive Philosophy* was to be the door to this new era.

Events have shown that Comte was overly optimistic, but with his underlying concept all modern sociologists agree.¹ The manner in which men think and the symbols with which they do their thinking are important determinants of their mode of life. As men have come to think in terms of the verifiable realities of nature, they have increased their ability to control nature. And there is at present every reason to suppose that men can ultimately achieve a body of tested—positive—knowledge about societies comparable to that which they now have concerning physical and biological nature and that with such knowledge they can exercise a control over their social affairs comparable to the control they now exercise over the physical and biological world.

The Concept of Inevitable Change.—Comte's idea that man's way of thinking inevitably progressed through three fixed stages has not proved valid. Historical and other evidences indicate that there are no "inevitables" in social life and that there is nothing in the nature of things to assure that a given society will in time and without intent and effort arrive at some predetermined state. That a society has a destiny, whether

¹ For a vigorous statement of the neopositivist position in contemporary sociology, see G. A. Lundberg, *Foundations of Sociology* (Macmillan, New York, 1939). Not all modern sociologists would agree with Lundberg's ideas of the most fruitful methods to be followed in developing sociological knowledge; but they cannot dissent from the thesis that sociology will ultimately make its contribution to the welfare of man in much the same way as such antecedent sciences as physics have done, i.e., by the process of scientific discovery. That process will be discussed in Chap. XIII, Science and the Arts.

it be a destiny to rule the world, to achieve perfection, or to decline toward obscurity, is not in accord with scientific findings. "Destiny" is a metaphysical concept, an emotion-fraught word entirely devoid of scientific meaning.

That Comte thought in terms of destiny, of inevitables in human history, is evidence that he was not so capable of scientific thinking about society as he believed himself to be; and in this respect he did science a great disservice. For his version of social destiny, his idea of inevitable stages of social life, haunted the thinking of would-be social scientists for fifty years and even now appears in the writings of many social philosophers. Much of early anthropology was simply an attempt to prove, by the use of dubious data on primitive societies, the ultimacy of our Western social institutions; and until students of preliterate societies abandoned the idea that Western forms of social life were inherently superior to others, anthropology was no more than a special branch of social philosophy. The conservative implications of such pseudoanthropology are quite evident. If, as one theory ran, man had historically progressed by various predetermined stages from sexual promiscuity to arrive ultimately at the patriarchal family form, modification of that family system would be regressive; and divorce, child-labor laws, the entrance of women into business, etc., would be contrary to the laws of social evolution.

The idea that society moves from inferior to superior forms through a succession of stages was modified and made to support the doctrine of economic *laissez faire* by a conservative English social philosopher, Herbert Spencer, about the time of our Civil War. Spencer anticipated to a significant extent the evolutionary hypothesis of the biologist Charles Darwin, a hypothesis that was shortly to set off a new trend in social philosophy. But Spencer was in no sense a scientist, although he professed great respect for science and made elaborate observances to it. Spencer attempted to integrate all the sciences into one system and to find one fundamental law that would explain all phenomena, natural and social. In his view, societies move through predetermined historical courses in the same regular and inevitable way that the earth rotates about the sun. Such being the case, it was of course futile and foolish for man to attempt any control over his social destiny, particularly such forms of control as those that stem from government. Men were, however, continually attempting to do the impossible. They kept passing laws in an attempt to improve the state of their affairs; and these attempts, founded upon superstitions, hampered the working of the natural laws of social life. Scientific study of society, specifically sociology, would dispel such superstitions and would lead to the abandonment of such futile and harmful efforts. Thus Spencer, unlike Comte, did not think

that sociology could make any significant positive contribution to human welfare. For to Spencer's mind man's social destiny was determined by natural law.

In his discussion of the structure of society Spencer did, however, stress the interdependence of social elements; and the full realization of that interdependence has become the cornerstone of modern sociology.¹ Moreover, Spencer's treatment of society as a natural phenomenon, subject to the same kind of study as other natural phenomena, anticipated by many decades the scientific treatment of social data. Although many social philosophers, such as Montesquieu and Comte, had argued that man and his works are proper subjects for scientific study, the medieval theological idea that man was a product of special creation, subject to divine rather than natural or man-made laws, persisted. Not until man the animal was identified as a product of nature were scientifically acquired data on social life readily accepted. God's will was the easy, if unrealistic, explanation for anything and everything social. The idea that man was a product of nature rather than of special creation was contained in the writings of Spencer and many other social philosophers; but they were unable to advance any biological evidence either to disprove the Old Testament story of special creation or to demonstrate the natural origin of man. Thus it was Spencer's contemporary Darwin who in the middle of the last century set off a trend in thinking about man that was favorable to the emergence and acceptance of a science of society.

On the basis of a variety of evidences, inconclusive but highly suggestive, Darwin advanced the hypothesis that man had historically evolved from some animal antecedent by a process of organic variation and selective "survival of the fittest." In advancing this hypothesis, Darwin precipitated one of the greatest intellectual controversies of our age. With few exceptions, the scientific-minded men of the last half of the nineteenth century accepted the Darwinian hypothesis and did battle on its behalf against the folk-minded preachers, priests, politicians, and laity. By the end of the century the battle was all but won, and the intellectual climate of Europe and America had become favorable to the scientific study of man's social life.

The Idea of Progress.—The evolutionary hypothesis released man from the restrictions of divine will. Man became a product of nature, nature is amoral, and what man does is to be judged only in terms of natural law. The immediate consequence of the concept of biological evolution was, however, to provide the base for the development of a new thesis of inevitable human progress. Since man has evolved out of lower and in-

¹ This matter will be discussed in detail in Chap. VIII, Structural Dynamics.

ferior biological forms of life, because the higher forms could survive in nature whereas the lower forms could not, it is logical to presume that man's society has also evolved, the inferior modes of social life having been displaced in the social struggle for survival. And since the struggle for survival is continuous, society progresses; *i.e.*, society moves constantly toward perfection.

The idea of social progress had, of course, been central to Comte's philosophy. This new idea of social progress by natural selection of social elements had the advantage of being derived from a hypothesis already gaining acceptance as a scientific concept; and it thrived in reflected glory. Although many versions of the mechanism of social differentiation (the parallel to biological variation), of the nature of the struggle between social elements, and of the characteristics of survival were advanced, there was almost complete agreement among social thinkers that society evolves and, in evolving, progresses. Out of the effort to verify this theory has come modern sociology and a very large doubt that there is any close parallel between the processes of biological evolution and those of social development. By bringing man into the realm of nature, the Darwinian hypothesis did, however, remove society from the realm of theology and render it a fit subject for scientific investigation.

Sociology.—Such in brief and in terms of a few representative social philosophers is the story of the liberation of social thinkers from the tyranny of folklore. Only within the last half century have sociologists been able to undertake the monumental task of studying society with any degree of objectivity. Much of their effort during these years has of necessity gone into disproving commonly held beliefs about society; much has been dissipated because of the urgency of their desire to arrive at practical conclusions. And much has inevitably gone into the making of errors; for the method of science is that of trial and error, and few of the trials can be successes. Nonetheless, in the course of this fifty years or so there has been a steady accumulation of facts about society, its origins, and its characteristics, facts that now make possible a fairly systematic, although in detail tentative, presentation of sociology.

In the following presentation of the concepts and data of sociology no attempt will be made to indicate possible solutions to the problems of contemporary social life. To formulate answers to current social questions would be to repeat the error of the social philosophers, to rush via airy speculation to the answers and in so doing miss all the dull but necessary facts. As our factual knowledge and our intellectual comprehension of society grow and become refined, this knowledge and understanding will no doubt be put to use by social technicians to devise means

by which men can live together with greater efficiency and less distress, just as physics, chemistry, and biology have been put to use by engineers and other technicians in obtaining safer bridges, taller buildings, faster airplanes, plastic substances, and more productive crops. But just as physics, chemistry, and biology had to develop before these things were possible, so sociology must develop before any effective social engineering can be undertaken.

Chapter II

SOCIETY AND THE SOCIOLOGICAL FRAME OF REFERENCE

LIVING together in groups is not peculiar to man. Many of the lower animals band together. Wolves tend to run in packs; wild horses and cattle form herds; geese, quail, and many other birds travel in flocks and coveys; and even the insects form "social" groupings.

From the point of view of the survival of the species the advantages of living in groups are fairly obvious. Even simple aggregation has its values. If numbers of a species travel together, reproduction is facilitated, whereas if each individual travels alone, the chances that a male and female will come together at the proper time for mating are reduced. Moreover, there is safety for the species in numbers. Scattered, fish may be run down and devoured by predators until all are gone; in schools, most will survive the attack of a predator, since he will either weary of the chase or get his fill before any considerable proportion of them are gone. With such carnivorous animals as fish and wolves, living in aggregates further aids the survival of the species in that the stronger members of the group can eat the weaker if the normal food supply runs out.

Most animal groups are, however, more than simple aggregates. They are to some extent organized, the individual members contributing to the achievement of a pattern of group action. And any degree of organization has a marked advantage over sheer aggregation. The simplest kind of organization is that which appears among the herding animals. When one of the herd scents danger, he alerts the others; the members of the group more or less take turns keeping watch and resting during the night; and in some instances one of the herd is a sort of headman to whom the others look for guidance. Attacked under conditions where flight, the normal mode of defense, is impossible, the herd bunches up and presents a ring of flailing hoofs to the predator. Somewhat more complex is the organization of wolves when they hunt in a pack, and by far the most complex is the organization of bees and ants. Many ant groups, for example, jointly build a common habitation, distinguish categorically between group members and nonmembers, form themselves into two or more "classes," each with its special function in the life of the colony, store up food during the good season to carry them over the bad, and

maintain a sort of police department and house-cleaning service. In terms of their group organization the ants are much more closely allied to men than are the anthropoid apes who most closely resemble men in their physical characteristics.

Human Society vs. Animal "Societies."—Many parallels can be drawn between human society and animal "societies." There is, however, a basic distinction between man's modes of organization and the organized group life of various of the lower animals. The modes of organization by which the "social" animals live in groups are relatively fixed and rigid.¹ Domesticated bees, for example, carry on the same kind of organized life that they would under natural conditions. They never do learn that they are being exploited by the beekeeper and adapt themselves to this fact. Ant societies build their habitations in the same way generation after generation, thousands of generations after thousands of generations. When their hills are destroyed, the survivors rebuild in the same way and often in the same place. When domesticated horses "go wild," they revert in one generation to the simple herd pattern, having profited not at all by the fact that their forebears had been trained in the ways of men.

Unlike animal modes of organization, human modes of organization are flexible and adaptable. For biologically man is not predisposed to live together with his kind in any special way, as the ants and bees presumably are; and biologically man is capable of developing complex modes of organization and changing those modes of organization as the conditions affecting group life change.

Social vs. Biological Adaptation.—The survival of any species depends upon the ability of that species to adapt to any change that may occur in the conditions affecting its existence. Individually many of the lower animals can adapt to marked changes in circumstances. The bird can live out its life in a cage, the dog can become a house pet, etc. By such adaptation to "unnatural" conditions the individual member of the species is enabled to survive. But because of the rigidity of animal modes of organization, adaptation of a species takes the form of biological modification of the organic structure. And the process of biological adaptation is exceedingly slow, so slow in fact that when the conditions of life change radically, the species may die out before biological adaptation can take place.

Because man's modes of organization are flexible, man of all the animals

¹For material on the group relations of subhuman creatures, see W. C. Allee, *The Social Life of Animals* (Norton, New York, 1938); C. P. Haskins, *Of Ants and Men* (Prentice-Hall, New York, 1939); T. Just, ed., *Plant and Animal Communities* (The University Press, Notre Dame, Ind., 1939); R. Redfield, ed., *Biological Symposia*, vol. VIII, *Levels of Integration in Biological and Social Systems* (Cattell, Lancaster, Pa., 1942); and T. C. Schneirla, "Social Organization in Insects, as Related to Individual Function" (*Psychol. Rev.*, vol. 48, pp. 465-486, 1941).

can make his adaptations to changing conditions socially rather than biologically. And because he adapts socially, he has held a unique position in the world of nature. Man is and for long has been the dominant creature. As a species he has persisted in his present form for at least 15,000 years and perhaps thrice that long, while many other mammals have either disappeared or, like the horse, evolved into new forms. His numbers have meanwhile increased immensely, and he has spread out over the land surface of the globe. Only those land animals that have not seriously interfered with the affairs of men have survived man's conquest of the world. All the rest have either been exterminated, reduced to insignificant numbers, or modified in form to serve man's interests. In terms of status, numbers, and distribution man is so far ahead of the other creatures who inhabit the world that he is in a very real sense monarch of the plant and animal kingdoms. And while his supremacy, like that of any ruler, is always precarious, no organism—virus, bacteria, mold, yeast, tree, fish, insect, or mammal—has so far gained the upper hand.

The Need for and Basis of Society.—As an animal, man is born and remains without the bare essentials for survival. If as an individual he is to survive, he must be born into, provided for, and protected by a social group. He is at birth so immature and he grows to maturity so slowly that he cannot possibly survive on his own. Whereas the rat can shift for itself a few days after it is born and the kitten within a few weeks, the human child must have care for many years. At three years of age the human child is less competent than the three-months-old dog, and left to his own devices, he would promptly die. Even at maturity, the human animal is physically ill equipped to make his way in the world. For one thing, he is a naked creature, and there are comparatively few places on earth that are climatically hospitable to naked men. For another, he has no natural defenses against predatory creatures; and in unaided conflict with any of the larger animals he would inevitably lose. He could not escape detection, for he cannot change his skin color to blend into the landscape. He could not flee from his enemies, for almost any fish can outswim him and any animal of comparable size outrun him. Nor could he stand and fight; for he has neither superior strength and agility nor claws, horns, hoofs, fangs, or any other natural weapons. Furthermore, man has no exceptional ability to survive under physical hardships. He does not, for example, have an especially efficient digestive system, remarkable physical endurance, or a particularly high reproductive rate that might offset a high mortality rate; his reproductive potential is, in fact, far lower than that of most of the larger animals.

Man does, however, have some biological attributes that render him superior in degree to the lower animals. Unlike any other animal man has a completely opposable thumb and a completely upright posture.

The opposable thumb gives his hands a flexibility, grasping power, and dexterity vastly superior to that of the hoofs, claws, beaks, and other anatomical implements of the lower animals; and his upright posture releases his hands for specialized activities. More importantly, man has such elaborate vocal machinery and a so superior central nervous system that he of all the animals is capable of articulate speech. His vocal machinery is equaled only by that of apes and is far superior to that of all other animals. And his central nervous system renders him able to use this machinery in ways that the apes cannot. The apes learn to make a small variety of cries; of warning, of pleasure, and of pain; but the apes cannot, as man does, communicate with one another via a language.

These special characteristics are the biological basis for the fact that in spite of his many inadequacies man as a species has been able to adapt socially rather than biologically and thereby maintain his position of dominance. They are not the reason why he is dominant; they are the reason why he has been able to become dominant. Because he has the kind of hands that he does and walks on his hind legs rather than all fours, man of all the animals can learn to make and use the tools that permit him to kill the strongest beast and fly through the air faster and higher than can the greatest bird. Because he can communicate with his kind via a language, he can transmit what he learns for the profit of succeeding generations and develop the highly complex, flexible, and dynamic modes of group organization that are the distinguishing quality of human societies.

THE DIVERSITY AND CHANGEABILITY OF SOCIETY

The members of each society, and indeed of each group within a society, usually believe that their particular modes of social life are the right and proper ones for all decent and self-respecting human beings. Thus it is that for some centuries now Christian peoples have been sending missionaries out into non-Western societies to convert the poor heathens into accepting the ways of the true God so that their souls may be saved. And thus it is that the benighted heathens, content with their own gods and their own social practices, have generally been disinclined to adopt Christianity or to adhere to Christian morality, however eager they have been for Western tobacco, whisky, and firearms.

Ethnocentrism, the belief of each group in the superiority of its own social practices, aids in holding the group members together, in maintaining group morale, particularly during times of crisis, and in perpetuating the group ways generation after generation. But ethnocentrism has made it exceedingly difficult for students of society, who are also members of a society, to view the social life of various peoples with anything like the detachment and impartiality with which the physicist

examines electronic behavior or the biologist looks upon the life processes of an amoeba. Early anthropologists, for example, were prone to approach the study of primitive peoples with the patronizing air of a rich woman on a slumming party. As a consequence, they used their findings, such as they were, to bolster up their belief in the superiority of their own modes of social life rather than as contributions to the understanding of society in general.¹

Of recent years, however, anthropologists, social historians, and sociologists have been able to detach themselves sufficiently from their own social biases and prejudices to examine various societies in terms of those societies rather than in terms of social preconceptions. From such investigations have already come a vast accumulation of objective, *i.e.*, value-free, data on society past and present and a new concept of social causation. It would be impossible, and will be unnecessary, to record here the data from which this concept has been derived. A few illustrations of the diversity and changeability of the forms of social life may, however, be helpful in indicating the inadequacy of any simple explanation for society.

Diversity the Normal.—Although each society serves the members of the social group as the means by which that group survives, no two societies are or ever have been quite alike. Diversity in the form of group organization is the normal, similarity the exception. Not even the sizes of social groups are the same. A primitive village community may number no more than fifty persons and a tribal group no more than a hundred, so that a thousand people may be formed into anywhere from ten to twenty more or less discrete groups, each with its own particular and distinctive social practices. In some of the civilizations, on the other hand, both those of ancient times and those of today, tens or even hundreds of thousands of people may be banded together in one over-all system of social life.

Historically there has been no clear relationship between the size of a social group and its ability to survive. Some large societies, such as ancient Rome, have had relatively short life spans; others, notably China, have had exceedingly long ones. Some small groups have been crushed or absorbed by larger groups, as were the various Indian tribes of North America. Others have persisted and retained their integrity in spite of larger and stronger neighbors. The Swedish and Swiss peoples, for example, have in recent centuries been able to retain their political independence without resort to arms.

¹ E. Westermarck (*The History of Human Marriage*, 3 vols., Macmillan, London 1929), for example, used material on the family life of primitives only to demonstrate the superiority of Western monogamy and L. Lévy-Bruhl (*Primitive Mentality*, Macmillan, New York, 1923) to "prove" that primitive peoples are incapable of "logical" thought, *i.e.*, they do not think in the manner of civilized peoples.

Differences in size are no more striking than are differences in specific social practices.¹ Diet, for example, varies widely from society to society. Like any organism, the human animal must be nourished, and essential to the maintenance of good health is the ingestion of a considerable variety of organic substances and minerals. In times of famine men will eat almost anything that comes to hand. But the normal diet of a people, as distinct from their nutritional needs, is a limited selection from the many substances that are available or that might be made available; and what is considered edible is a matter of social definition. As a consequence the prized food of one society may be ignored in another. The Australian aborigines consider roast ants a choice delicacy, the Eskimos think highly of raw and somewhat rotted fish, and the nomads of Central Asia relish mare's milk as a drink. Contemporary Americans, on the other hand, drink cow's milk and eat well-cooked fish, and regard hot dogs and hamburgers as quite desirable food.

Aesthetic and Moral Differences.—Varied also are the aesthetic values and moral codes. The definition of feminine pulchritude, for example, differs considerably from society to society. All societies apparently value the possession of the usual number of arms, legs, eyes, etc.; but beyond this, few generalizations can be made. Some societies, such as the Arabian, place a premium on sheer bulk, while others, such as the Chinese, esteem the woman who is frail and small. Most societies depreciate natural physical deformity, but many have deliberately produced deformities in accordance with social standards. It might be assumed that men everywhere would at least prefer their women to have a clear, soft skin, whatever the color, and normally developed features, but such is not the case. Certain African primitives scarify the face; some file their teeth to points; others band and elongate the neck, enlarge the lips, and compress the skull. Nor have such practices been limited to primitives. Until very recently, the Chinese bound the feet of their women to achieve the deformed and broken "lily" feet; and at various times over the past centuries Western women have constricted their waists, padded their buttocks, lifted their breasts, or otherwise brought nature into conformity with the current social definition of feminine beauty. And what is considered aesthetically desirable in music, pictorial art, sculpture, architecture, etc., varies just as much from society to society.

¹ For descriptive material on the contrasting social practices of primitive peoples, see W. I. Thomas, *Primitive Behavior; An Introduction to the Social Sciences* (McGraw-Hill, New York, 1937); and G. P. Murdock, *Our Primitive Contemporaries* (Macmillan, New York, 1934).

There are available a great many excellent descriptions of the social life of single primitive groups, of which the following are representative: C. Du Bois, *The People of Alor* (University of Minnesota Press, Minneapolis, 1944); and M. Mead, *Growing Up in New Guinea* (Morrow, New York, 1930). For descriptions of many other primitive and some civilized societies, see Supplementary Bibliography 1.

Social definitions of wise, honorable, and virtuous conduct are likewise highly varied. Among the trading peoples of the Levant it is considered the height of stupidity to tell the truth if a falsehood will better serve the interests of the speaker; conversely the Manus of the South Seas consider it necessary, if not wise, to tell the literal truth regardless of the consequences. Among the Eskimos a virtuous wife gives her favors to any man whom her husband indicates, while in many other societies extramarital relations are looked upon as a major violation of divine law or grounds for divorce and in some instances even death. The patriarch of an early Roman family, for example, could condemn to death any of his daughters-in-law who was found guilty of violating the rigorous code of sex conduct. For a woman even to speak to a male who was not a member of her family was considered sinful and dishonoring. In some societies premarital sexual relations are the normal, and in others they are forbidden. Whereas the girls of Samoa have many affairs before they finally settle down in marriage, any premarital experience of a girl in China, Japan, and western Europe has lessened, and sometimes destroyed, her marriageable value.

Organizational Differences.—These and the thousands of other differences in social practices reflect equivalent differences in the basic ways in which groups are organized and by which group life is maintained. The dominant unit of organization may be family, clan, moiety, tribe, village, or state; each is, however, subject to wide variation. The American Indians, for example, were organized into tribal groupings. But each tribe, Blackfoot, Crow, Iroquois, Sioux, etc., had its somewhat distinctive language, its own peculiar religious beliefs and practices, and its special system of tribal relationships and leadership. Some tribes were nomadic, some more or less sedentary. Some lived by the hunt, some by fishing, and some by agriculture.

For many groups the fundamental unit of organization has been the family. The size, structure, and practices of the family have not, however, been uniform. The Eskimo family is a tenuous group that may be disbanded at will. The premodern Chinese family and the early European family, on the other hand, were permanent and continuing associations; and although both were patriarchal in type, the patriarch of the Chinese family had far more control over his sons than did the patriarch of the European version. In sharp contrast to the patriarchal is the matriarchal family system, a type that still persists among the Basques of Spain. In this system, family name and properties descend through the female line; the matriarch rules not only her household but all family affairs; and at marriage the groom goes to the house of his bride. Many, but not all, family systems have been monogamous in character. Polygamy is, as a matter of fact, practiced in so many societies that anthro-

pologists once thought it to be a "stage" in the natural evolution of monogamy. Polygamy is itself subject to great variation within the two basic forms, polygyny, in which the man has a number of wives, and polyandry, in which the woman has a number of husbands. Nor is there any clear demarcation between the monogamous and polygamous family systems. Some essentially monogamous family systems have included the practice of concubinage, a restricted form of polygyny. Even among Western peoples the maintenance of a "second wife" is not uncommon. In France, indeed, an expensive mistress is a show piece.

Just as varied as the family is the political organization of different societies. Most primitive groups are ruled by custom and tradition and are little subject to formal law and political leadership. The role of government was also relatively insignificant in the life of the premodern Chinese. Among the Egyptians, the Greeks, and the Romans, on the other hand, government was a dominant motif; and it is, of course, a major agency of group organization in all modern and some contemporary primitive societies. The form as well as the extent of governmental organization differs from society to society. In some societies authority has been hereditary and well-nigh absolute, the ruler having power of life and death over his subjects. Such was the case in pre-Revolutionary Russia, and it still is in Arabia. In others, the opposite extreme appears, the so-called "democratic system," in which rulers are chosen by more or less popular acclaim and their power is stringently restricted by law and tradition.

Changeability of Society.—There is nothing in the nature of social practices that precludes men from changing these practices when occasion warrants. But because the members of each group are inclined to believe that their society is the only right and proper one, they are prone to think that the practices they adhere to are sacred and inviolable. There is, for example, considerable concern in Western societies today over the decline of many old forms of social organization—the family, the community, the church, and the small, self-sufficient farm unit. It is assumed that the decline of these modes of life is somehow contrary to nature or to the will of God, or at any event to the welfare of man, a view that presumes these forms to be good for all time and all circumstances. Such a view is equivalent to assuming, as men did half a century ago, that the only feasible means of personal transportation is the horse and buggy.

Whatever men may believe, the fact is that all societies are subject to change. Change, whether slow and to the members imperceptible or rapid and distressing, is so characteristic of society and so necessary for the long-run survival of a group that it may be said of societies, as biologists have said of organic species, that they must change or die. During

times of rapid change, such as the present, there is a tendency for men to look back enviously to the life of the past, assuming that in the past change and its distractions were unknown. A century or two ago philosophers wrote much about "natural man" and the peaceful life that he was supposed to have known. Today many philosophers look back upon the Middle Ages as a time when life was calm and untroubled by such symptoms of social change as divorce, strikes, riots, political controversy, and wars. Compared with the social present, the past may seem to have been simple, stable, and uncomplicated; but the simplicity and stability of the past are an illusion born of ignorance. Undoubtedly some societies have been more stable in some periods than they were at others. But no society at any time has been completely stable, as is, say, the organization of an ant colony; and at most times most societies have been in process of change.

Change in Primitive Societies.—Data from the study of primitive societies have been more useful in indicating the great diversity and the internal complexity of social systems than in indicating their changeability. Since primitives are preliterate peoples, *i.e.*, they have no written records of their past, anthropological study of a primitive society has of necessity dealt with the society as of the time of investigation. Most modern anthropologists recognize the limitations of this "cross-sectional" sort of study—that it lacks historical perspective and results in a static picture of what has actually been changing, however slowly, through time.¹ For evidence of change in primitive societies, they resort, therefore, to archaeological sources. From the excavation of residence sites and from artifacts, such as tools, weapons, and in some instances habitations, it has been possible to reconstruct the material history of a great many preliterate peoples. That history is invariably one of change, usually slow but upon occasion rapid and radical; and, by inference, it is reasonable to assume that the intangible patterns of social organization changed through time in similar degree.²

Inferential evidence on the changeability of primitive societies is also provided by the fact that a great variety of social systems have been developed by the primitives of Polynesia, of Melanesia, and of the Americas. Anthropologists tend to the opinion that these regions were originally settled by men not more and possibly much less than five thousand years ago. Within that period of time hundreds of distinctive tribal systems and such contrasting large-scale societies as those of the Incas and the Aztecs were developed by the American Indians. Equally

¹ See A. S. Tomars, "Some Problems in the Sociologist's Use of Anthropology" (*Amer. Sociol. Rev.*, vol. 8, pp. 625-634, 1943).

² For a discussion of the inferential value of archaeological data, see G. Clark, *Archaeology and Society* (Methuen, London, 1939).

wide differences among the many societies of Polynesia and Melanesia developed within the same short period.

Change in Ancient Civilizations.—Recorded evidence of the long-run changes in societies is of course available only on those peoples who have been literate, and the written records are at best fragmentary. The written records have, however, often been supplemented by archaeological excavations at the sites of ancient cities; and the total evidence provides a clear enough demonstration that the various civilizations of antiquity, those of both Europe and Asia, were far from static.¹

All the societies that developed and disintegrated about the Mediterranean, and from which contemporary Western societies are in part derived, were continually changing. In the valley of the Nile, supposed by some to have been the mother of civilization, ever more complex and efficient ways of group life continued to evolve for nearly ten thousand years. In near-by Mesopotamia, and for almost as long, quite distinctive ways of social life were being developed. From about 4000 B.C., when the peoples of both Egypt and Mesopotamia began to record their experiences, the record of ceaseless change is clear. In the thousand years before the opening of the Christian Era, a variety of other civilizations, Assyrian, Greek, Carthaginian, Roman, and many others, evolved and declined. Empire after empire was built and wrecked. Change followed change, and nothing was ever twice quite the same. Upon the decline of the Roman Empire new social systems began to appear among the peoples of western Europe; and the Byzantine Empire began to flourish, preserving and adding to the knowledge and practices that were in time rediscovered by an awakening Europe. The blank period in the record of western Europe, the so-called "dark ages," results not from the fact that social life was unchanging and complacent but from the fact that there were few persons capable of and none interested in keeping the records of change. Certainly, as Europeans began again to take pen in hand, there was little but change to report.

Change in Premodern Chinese Society.—The best historical demonstration of the changeability of society and of the value of change in group survival is that of the Chinese people. Many Western social thinkers have been inclined to assume that Chinese society was cast into a mold at the time of Confucius and remained unchanged until the coming of Westerners. The Chinese do have an unbroken history of at least three thousand years, but that history is a record of change.

Beginning somewhat more than a thousand years before the opening of the Christian Era, the people of the upper Yangtze river valley

¹ See A. M. Sanford, *The Mediterranean World in Ancient Times* (Ronald, New York, 1938); and R. Turner, *The Great Cultural Traditions* (2 vols., McGraw-Hill, New York, 1941), vol. I, *The Ancient Cities*; vol. II, *The Classical Empires*.

began to spread over the whole of the eastern Asiatic mainland. They were by all possible criteria successful; they not only survived innumerable conquests but they steadily increased in numbers. Chinese technology was probably very much the same in the seventeenth century as it had been in the seventh, but up to that time it had developed very rapidly. By modern standards, it was not a very effective technology, but it was far in advance of the technology of seventeenth-century Europeans; and it permitted the maintenance of a large and expanding population at a standard of living considerably above that which was then current in Europe.

Like the technology, the ethical principles of Confucius remained as a continuing and stable part of Chinese life. But Confucianism, unlike Christian theology, dealt only with ends—the good life. It left largely to the living the matter of determining the means, the social practices, by which the good life could be obtained. Hence the scholars, the high priests of Confucianism, were inclined to be liberal toward political and other social changes, believing as they did that means were subordinate to ends. Moreover, since Confucianism, unlike most religious philosophies, was concerned with the living and only incidentally with the spirits of the dead, it encouraged a pragmatic outlook, a persistent interest in this life rather than in some presumed afterlife, and a healthy regard for survival. Insofar as ancestor worship, a folk rather than official system of beliefs, conditioned the life of the people, it served to intensify this pragmatism; for one's welfare in the company of one's ancestors depended upon the perpetuation of one's family rather than upon adherence to a prescribed set of practices during one's life.

The peculiar genius of the Chinese people lay in their ability to subordinate social means to ends, an ability that Western peoples have only recently and most reluctantly acquired. The theory that the Emperor, the Son of Heaven, was divine never deterred the people from revolting against his representatives when tax demands became excessive. Nor did it assure permanent tenure for the Emperor and his descendants. No government was safe from an irate citizenry. The people did not vote, in the modern manner, but they often revolted. Moreover, the form of government was flexible and constantly changing. At times political control was comparatively autocratic, at others lax and quasidemocratic. During some periods, many aspects of life were regulated by law—the price of rice, the duties of a son, the conditions of landownership, etc. But in other periods control of such matters was left to informal agencies, government being limited to the collecting of taxes and the building of royal palaces and gardens.

The economic organization of the Chinese likewise vacillated over the centuries, ranging from extreme individualism to outright state socialism.

Familism, an economic communalism within the large family, was the dominant but never exclusive motif. As circumstances changed and new problems arose, the Chinese adapted their economic procedures accordingly. They were not restricted by a single and all-encompassing economic dogma. At any particular period, certain economic activities might be carried on by the state, while without any sense of contradiction others were conducted by strong craft and mercantile guilds, still others by the family, and the remainder by and in the interest of individuals, in the capitalistic manner.

The cataclysmic changes that the Chinese (and all contemporary peoples, for that matter) have been experiencing during the past few centuries are, thus, in no sense new. For them, as well as for all other peoples, change has apparently been as much a normal part of social life as has stability.

THE SOCIOLOGICAL CONCEPT OF CAUSATION

The infinite diversity and changeability of the forms of social life clearly indicate that there is no one system of group organization that is right, natural, or inevitable. To the sociologist this means that no single cause can be found to explain all forms of social life. There must be many "causes" for such variable phenomena as the ways by which men live together, just as there are many causes for the various diseases that afflict the human body. To explain societies in terms of some one cause would be as unrealistic as to explain such varied disturbances as cancer, stomach ulcers, and measles in terms of diet, displaced vertebrae, or a failure of the spirit. Nonetheless, it has been common practice to attribute all forms of social life to some single cause, such as a divine will, an instinct for social life, or a group mind, even as it has been "common sense" to explain every sort of ache and pain by reference to some one thing.

The Folk Idea of Cause and Effect.—What will be deemed common sense varies from society to society and from individual to individual. In some societies it has been common sense to blame a personal enemy, known or unknown, for sickness of every kind; in others, to blame the food eaten, the presence of evil spirits, an obstruction of the large intestine, or something else.

Common sense has told some people that work is the way to wealth and others that wealth may be best acquired by theft. Varied though the dictates of common sense may be, a common procedure underlies all such thought—the categorical division of all things into causes and effects.¹

¹ The historical roots of this concept are discussed by H. Kelsen in *Society and Nature: A Sociological Inquiry* (University of Chicago Press, Chicago, 1943).

In the folk frame of reference, causes are thought to be antecedent in time to effects; each effect is thought to have its specific and unvarying cause; and each cause and its effect are considered to be an independent system. God causes rain to fall, evil instincts are the cause of criminal behavior, an incompetent president is the cause of the decline of business, an increase in the use of twin beds is the cause of the rise in the divorce rate, etc. Various peoples may disagree as to which of two things is cause and which is effect, what two things are causally related, and whether the effect, however caused, is desirable or not. But all folk thinking in all societies is in terms of simple one-way cause and effect. Thus to those who so believe, their society is what it is because God has so decreed, and it will remain as it is so long as God endures.

The Concept of Multiple and Interdependent Variables.—As sociological knowledge about the diversity and changeability of societies grew, it became evident that social life could not be explained in terms of simple one-way cause and effect and that a much more complex concept of causation was necessary. The concept that has been developed and that does provide a satisfactory interpretation of the known facts of social life is that society is the product of multiple and interdependent variables. This concept is the basic item in the sociological frame of reference, and from it stem all the other sociological concepts.¹

The concept of multiple and interdependent variables has come to replace the simple cause-and-effect concept in each of the sciences, physics, chemistry, biology, etc. In applying the concept, sociology has, however, encountered a peculiar difficulty not met by the other sciences. The physical and biological sciences can more or less ignore folk views, since what people think causes rain to fall, plants to grow, etc., will have no effect on these phenomena. Folk views about society, on the other hand, cannot be ignored for folk views about society affect social life. If for no other reason than that the majority of the members of a society can comprehend things in no other terms, their leaders and spokesmen operate in terms of simple cause and effect. Modern journalists cast all their descriptions and analyses of social phenomena into this framework; editorial writers still blame criminals for crime, politicians for political chicanery, the decline of religious faith for the growth of immorality, and the machine, once the automobile and more recently the airplane, for social unrest, poverty, or whatever else they find distasteful.

¹ For an extended discussion of this concept, see vol. I, pp. 75-78, and vol. II, appendix 3, of G. Myrdal, *et al.*, *American Dilemma: The Negro Problem and Modern Democracy* (2 vols., Harper, New York, 1944). For a somewhat more philosophical discussion, see R. M. MacIver, *Social Causation* (Ginn, Boston, 1942). See also F. H. Knight, "Social Causation" (*Amer. J. Sociol.*, vol. 49, pp. 46-55, 1943); and P. A. Sorokin, *Sociocultural Causality, Space, Time* (Duke University Press, Durham, 1943).

Legislators continue to attack this or that inadequacy in the social order by the enactment of laws against this or that specific thing presumed to be the cause of the inadequacy; and preachers still speak of the Devil as though he were a superbeing who causes the troubles that beset mankind. For thus far, the development of science has done little to lessen regard for the cause-and-effect concept in respect to social affairs.

Interaction.—Social phenomena, and all phenomena for that matter, are inconsistent when things are divided into causes and effects. What in one instance may appear to be a cause may in another instance seem to be an effect rather than a cause; *i.e.*, the sequence in which two things appear is not constant. A psychologist observing a mother spanking her child might at one time conclude that the mother's spanking caused the child to cry; at another time he might just as logically conclude that the contrary is true—that the child's crying caused the mother to spank him. Likewise, a sociologist studying marriage and family life might from some observations conclude that marriage sets off (causes) forces that lead ultimately to the bearing of children; but unless he is completely naive, he knows perfectly well that in some instances the sequence of events is reversed.

The idea of simple cause and effect results from fragmentary experience, from the observation of what happened in a given interval of time, during a specific minute or a particular day, month, or year. The scientist may observe what happens during any given interval of time, just as a critic may drop into a play at a given point. But the scientist does not conclude that what he is observing is one thing causing another, any more than the critic should conclude from one scene of the play that the sullenness of the husband is the cause of the wife's infidelity. Had he come in earlier or stayed longer, he might as reasonably have concluded that the husband was sullen because the wife was unfaithful. In reality, if not in the theater, the two things would be inseparably related.

The actual relationship between two related things can best be understood as an interaction; each is at once cause and effect. Oxygen and hydrogen, for example, interact and produce water; a girl and a boy, themselves products of many prior interactions, interact in a multitude of ways that culminate in marriage and a new series of interactions; a thousand or a million or a hundred million human beings interact continuously, and the product of that interaction at any moment is a society as of that moment. The concept of interaction eliminates the confusion and the contradiction that arises when a variety of fragmentary observations are regarded in terms of cause and effect; it makes comprehensible what would otherwise appear as contradictory relationships.

Interdependent Variables.—In any interaction the function of each factor, the part it plays in the interaction, varies in accordance with the

function of the other. Each factor is thus a variable, its character depending upon the character of the other factor. This is clear enough in the case of hydrogen combining with oxygen to form water, for in combination with any other element hydrogen aids in the making of something other than water. The same principle holds, although less clearly, with human beings and with society itself. The character of a given man depends as much upon the company he is in as upon what he was before he entered that company. With his first wife he may have been a sullen and disagreeable husband; with his second he might well be a cheerful and endearing one. He may, likewise, be the life of one party and the death of another. The people of the United States, to take a still more complex illustration, were in 1929 loaning money and sending goods to the people of Germany; in 1944 they were sending only bombs and shells and other instruments of death and destruction. The difference in the behavior of the American people toward the German people—their change from friendly nation to enemy—was in part a consequence of the change in the behavior of the German people toward the American people.

Multiple Variables.—No phenomenon can be wholly explained in terms of the interaction of two interdependent variables. Even the simple phenomenon of oxygen and hydrogen forming water involves more than the interaction of two atoms of hydrogen and one of oxygen. Whether they will form water or not depends upon at least two other variables, pressure and temperature. And the interaction that produces any social phenomenon involves so many variables that any attempt to isolate even the more important of them is exceedingly difficult.

At one time or another those concerned about juvenile delinquency have fastened on the idea that poverty is the primary cause of delinquency (the poor child wants to have better things but can secure them only by antisocial action); that lack of playgrounds is the cause (the play of street kids gets them into trouble with the law and makes them antagonistic to the police, whereas the same play activities would have no such consequences if they occurred in a vacant lot or public playground); that indifferent parental care and bad parental example are the cause; that poor police techniques are responsible (the child picked up for a minor infraction of the law is stigmatized and, perhaps, sent to a reform school where he associates with hardened child criminals); or that crime-romanticizing motion pictures, pulp-magazine stories, etc., are to blame. From time to time attempts have been made to prevent juvenile delinquency by attacks upon one or another of such presumed causes.

But in each instance subsequent study has demonstrated that the particular factor singled out as the cause was only one of a multiplicity of

factors that may enter into the making of a delinquent. And the role of each of these factors is never, apparently, constant. Some few of the many poor children do become petty thieves; most do not. Some few of those who grow up in the streets get into trouble and acquire antisocial tendencies; most do not. Moreover, some children who are reasonably well provided for economically and who have adequate play facilities manage, nevertheless, to become delinquents. It is a patterning of many factors, no one significant in itself, that produces a juvenile delinquent.¹ The importance of any single factor depends, therefore, upon the character and intensity of the many other variables that are involved in the interaction. The son of a criminal may grow up to follow in his father's footsteps, but only if all other significant factors are favorable to his developing criminal interests and ambitions. If they are not, his having a criminal for a father may result in his learning that crime does not pay; and he may grow up to be a priest or a lawyer rather than a criminal.

And thus it is with all social phenomena, crime and war, trade and travel, family life and the operations of a political system. All the ways of men that in combination go to make up a society are products of interactions in which a multiplicity of variables are involved. To isolate any one of the many factors and designate it the cause of whatever is under study is to ignore the complexities of social life and to return, however devious the route, to the folk idea of simple one-way cause and effect.

SOCIOLOGICAL ABSTRACTIONS

Specific phenomena, like the factors that produce them, vary infinitely. One of the few definite statements that may validly be made about the world is that above the molecular level no two specifics are ever quite alike, no two snowflakes, no two juvenile delinquents, no two marriages, and no two wars. But if the principle of infinite variation were not subject to qualification, there could be no science of sociology; for there would be no categories of social phenomena, nothing but the socially specific and unique. The study of society would then be about as important and useful as the collecting of antiques or old masters, which is to say of no importance, however amusing.

Social Norms.—What makes any science possible is the fact that the infinite variations of a large number of specific phenomena can be reduced to their most frequent, consistent, and, hence, significant attributes. Whenever a large number of specifics—snowflakes, juvenile delinquents, marriages, or wars—are examined in terms of some criterion, it is found

¹ See T. E. Sullenger, *Social Determinants in Juvenile Delinquency* (Wiley, New York, 1936); and H. W. Thurston, *Concerning Juvenile Delinquency; Progressive Changes in Our Perspective* (Columbia University Press, New York, 1943).

that the range of variation is limited and that somewhere, not necessarily midway, between the two extremes there is a point around which a high proportion of them fall. These points, usually described nonstatistically as norms, are the primary data of science.

All sociological description and analysis center upon norms of social behavior. Deviations from norms, specifics, are scientifically interesting only to the extent that they help to throw light on the factors that enter into the production of norms or that lead to the establishment of new norms. Even such a simple and commonplace observation as that it is the custom in America for women to wear skirts is the statement of a norm of clothing behavior, not a specific fact. What any given American woman will wear, if anything, at any given moment will, obviously, depend upon a great many factors—her health, the time of day, what she happens to be doing, and where she is. At any specific time and place a specific American woman may be wearing not skirts but pajamas, a hospital jacket, a bathing suit, jodhpurs, shorts, or trousers (the normative garment for American men). Most of their waking hours, however, most American women wear skirts of some sort or other; *i.e.*, the skirt is the normative garment for women in America.

As with women's skirts, so with all the characteristics of social life. Nothing can be said of Americans that is true of all of them all the time, not even that they all speak English. As every American knows, there are a great many ways in which English is spoken in America. But, as the American discovers if he goes to England, there is an American version of the English language—a norm or a number of norms (regional and class) that are distinctly American.

Norms as Abstractions.—All scientific norms are abstractions; they do not represent any one of the many specific phenomena from which they are derived. When, for example, the ichthyologist describes the characteristics of the rainbow trout, he is not describing any fish that ever existed. He is, rather, describing an abstraction, the norm of a large number of fish more like one another than they are like any other kind of fish. When the ornithologist describes a Baltimore oriole, he does not mean that any single oriole will exactly fit the description or that only those that exactly fit the description would belong to the category. When the pathologist describes the characteristics and course of the common cold, he is describing an "ideal" or "typical" cold. No physician will encounter an actual cold that fits this abstraction in every particular; but his knowledge of the normative attributes of common colds will assist him in recognizing both the typical and the atypical elements in any specific cold.

In the same way, when the sociologist speaks of the family, modern marriage, class organization, the Roman Church, criminals, inventors, or

the like, he is referring not to what any given man does or to what all members of a group do but, rather, to an abstraction. Such abstractions are, of course, much more complex than that of the Baltimore oriole, for many more norms are involved; but the procedure by which they are arrived at is the same. To judge their validity by relating them to any specific—to conclude, for example, that the American family is not as it has been described because one or even a hundred specific American family groups are otherwise—is to lose sight of the fact that they do not represent any particular specific and that sociological abstractions, like all other abstractions, are derived from the study of countless specifics, no two of which are quite alike.

The infinitely varied specifics of social life—"facts," as the layman might say—are the raw data of sociology, but they do not of themselves make sociology. A mind, a book, or a course filled with such facts is a sort of museum, but it is no more sociology than a dictionary is a novel. The objective of sociology, as of any science, is to develop laws of prediction, to make it possible to say that, if this or that occurs, such or such will probably follow; and laws of prediction cannot be developed from a fact or even a great assortment of facts. Not until facts have been analyzed and reduced to abstractions can laws be formulated and tested out.¹

Sociological Definitions.—The term "society" and most of the other terms used by sociologists are in the public domain. This does not mean, however, that scientific knowledge about society is any more widespread than is knowledge about physical and biological phenomena. In common usage "society" refers to tangibles rather than abstractions, to specifics rather than norms. Thus "society" is usually used to designate the members of a specific in-group, persons rather than the social relationships of those persons; "institution" is commonly applied to physical structures, such as the Old People's Home, the County Poor Farm, and the bank on the corner of First and Main Streets; and "culture" is likely to refer to some special kind of erudition, such as ability to speak French or talk about Keats, that can be acquired by taking the right courses in college.

Society as an Abstraction.—In sociological usage, the term "society" refers not to a group of people but to the complex pattern of the norms of interaction that arise among and between them. It is an abstraction derived from the characteristic ways in and by which the group lives together, and it is both antecedent and subsequent to the people who at any moment constitute the group. Whereas the people who live together socially come and go, the pattern of their interactions has a certain durability. For the sociologist, then, it is the play, not the players, that

¹ For references on the methods of sociological research and related matters, see Supplementary Bibliography 2.

is important. More accurately, the players are important only as agencies for the perpetuation of the play or as contributors to the gradual modification of that play.

A number of people are tangible; they can be counted, weighed, etc. They are "things." A society, on the other hand, is an intangible; it is process rather than thing, motion rather than structure. The processes that constitute social life involve and result in many tangibles—roads, houses, books, etc.; but these things are, as will be demonstrated later, the least important aspect of society. The important aspect is the system of relationships, the pattern of the norms of interaction, by which the members of the group maintain themselves. That pattern of relationships may be variously designated, depending upon what is to be stressed, as society, the social system, the way of life, the social organization, or the culture of the group.¹

Structural Analysis.—For purposes of analysis it is sometimes convenient to describe norms of interaction as though they were things rather than processes. They are thus looked upon as tools of group life. It must be kept in mind, however, that social "tools," unlike physical tools, exist only in and through use; they are without visibility or permanence. When the conversation has ended there is no conversation.²

The character of urban life in the contemporary world, for example, may be analyzed in terms of the social tools involved—the techniques of production, the techniques of sanitation, the division of labor, the methods of landownership, etc. In structural analysis of this sort a descriptive device is being used; for all these phases of urban life are *de facto* interactional processes that exist only when they are occurring. During the early morning hours the whole system of interactions temporarily runs down; people withdraw from social participation, and the urban society "dies." For the city lives through the interactions of people; and when their interactions cease, the city, as a complex and multisided mode of social life, disappears. The buildings, the streets, and the other physical paraphernalia of urban life do not constitute the city; they are the place where life occurs. And when, as in the predawn hours, life falls to a low ebb, the city's physical plant is desolate, marking the place where society was and where it will again arise.

¹ Wherever possible, strictly sociological terms will be used as defined in the *Dictionary of Sociology* (H. P. Fairchild, ed., Philosophical Library, New York, 1944) or in *Handbook of Sociology* (E. B. Reuter, Dryden, New York, 1941).

² But as a matter of fact, the contrast between the tangibility of a tool such as a hammer and the intangibility of a social pattern such as marriage arises from our special point of reference. By assumption the physical tool that is so substantial to men will not be visible or tangible to the electrons and protons whose perpetual interaction produces the metal of which the tool is constructed. The point has no practical significance, however, to the human electrons and protons whose interactions constitute society.

SOCIOLOGICAL SOURCES

The social events that are ordinarily regarded as important—the death of a king or the winning of a battle—are of little sociological significance.¹ These events are commonly thought to be the causes of things to come. The ending of a war, for example, is greeted by the victors as the forerunner of peace and prosperity, the election of a new president as the beginning of a new and better era, and the founding of a union of nations as a turning point in international relations. It is events of this sort that make headlines and that come to be compiled into conventional histories. From the sociological point of view, however, the events that make headlines and that become recorded are like the vigorous gestures of the magician; they distract the eye from the many small events that are constantly occurring and that in totality are of great importance.

Events and the Society.—To the journalist and historical-record keeper only the unusual is important.² Births, deaths, and marriages are normal events, more important but of much the same character as the coming of winter, the first robin of spring, and the ripening of the grain in the fields. The birth of a child may be in the nature of a turning point in the lives of his parents; and the death of her husband may shatter a woman's personal world. But from the viewpoint of the local scribe compiling his chronicles and the newspaper editor hurrying toward a deadline, such events are too commonplace to be given much attention. Thus a great deal of the daily life of the individual, and therefore of the group, is made up of events that do not become recorded. Everyone knows that such and such was done today, as it was yesterday and all the other days, because that is the way everyone does this thing. Why then describe it?

Since that which is normal in the life of a society generally goes unrecorded, any attempt to gain a comprehensive knowledge of the character of a society of the past from records that were made at the time is subject to wide error. From the fact that an event was commented on, it may perhaps be inferred that such events were not a normal part of the life of the people. From contracts and other documents it may be possible to draw some inferences concerning the patterns of family life, the economic relationships, and the religious practices. From the decrees of kings and the judgments handed down by their magistrates some idea of the nature of the political system may be deduced. But any attempt

¹ For discussions of ways by which historical data might possibly be used, see *The Cultural Approach to History* (C. F. Ware, ed., Columbia University Press, New York, 1940).

² See H. M. Hughes, *News and the Human Interest Story* (University of Chicago Press, Chicago, 1940).

to reconstruct from such evidences the whole of the given society at a given time is to build hypothesis upon hypothesis without possibility of verification. And when such records of a period are supplemented by the literary and artistic remains, the possibilities of error are only increased. The need for caution in the use of historical evidences becomes apparent when one considers how far astray a future social analyst would go were he to attempt to ascertain the character of contemporary American society by taking at their face value the recorded pronouncements of political executives and business leaders, the stories that get into our newspapers, and the versions of our life that are presented in plays, novels, and, most especially, motion pictures.

The difficulties of reconstructing the social life of peoples and times past from the records of those peoples have made most American sociologists skeptical of the historical approach to sociology, particularly the approach that is exemplified by German sociologists.¹ American sociologists have concentrated upon the development of techniques for the measurement of things as they are, and most of their analysis has been of contemporary societies. In order to illustrate the concepts thus arrived at, some use will, however, be made in the following chapters of sociohistorical data.

Current Events and Sociology.—The kinds of events that become recorded not only fail to reveal the normative life of a people but also fail to yield much data on social change. The abrupt deviations from the normal that become recorded—the murder of a king, the occurrence of a plague, the outbreak of a war, and the signing of a constitution—reflect changes that have already occurred. But they do not indicate the factors that have brought those changes about—the slight, day-by-day events that ultimately culminate in the modification of a political system, the substitution of steamships for sailing ships, the transition from static warfare to war of movement, or the development of techniques by which plague can be prevented.

All this is to indicate that the alarms and excursions of contemporary life as well as of history do not contribute much to our understanding of how things came to be what they are and of the changes that are and have been occurring. Little about the social past can be learned from the history of kings and wars, and little about the social present can be learned from the newspapers or even the reports of the more serious of the journalists. The latest ax murder may make exciting news for a day or two, but it adds nothing to our knowledge of crime. The latest race riot

¹ Of whom M. Weber is perhaps best known in America. See H. Speier's article, "Weber" (*Encycl. Soc. Sci.*, vol. 15, pp. 386-388). For a discussion of the historical school in sociology, see Chap. 15 of H. E. Barnes, H. Becker, and F. B. Becker, *Contemporary Social Theory* (Appleton-Century, New York, 1940).

may be a nine-day journalistic wonder; Senator Snort's pronounced views on internationalism may have the political commentators breathless; and the New Plan for Interglobal Cooperation may be conversation for the intelligentsia for weeks. But such matters throw little light on the nature of social phenomena; they are of only slightly greater sociological than geological importance.

The sociologically significant data on current society are secured from such dull documents as census tracts and by such laborious procedures as the making of detailed studies of the life of a village or a small town or some phase of the life of a great city or the collecting and analyzing of the life histories of a thousand criminals to ascertain what was common to their careers. From such studies some knowledge of a contemporary society and of the changes it is undergoing may be gained; and by comparing one society with other societies, studied in equally unexciting ways, it may be possible to draw certain conclusions regarding society in general. Interesting current events may be used to illustrate these conclusions, and some will be so used in the discussions to follow. But illustrations are not to be mistaken for the data upon which conclusions have been based. One swallow does not make a summer, nor does one illustration prove a point.

Chapter III

THE INDIVIDUAL AND SOCIETY

THERE has been much speculation regarding the relationship between the individual human being and his society. Is the individual prior to the society? or is the society prior to the individual? "Prior" may be thought of either as previous in time or as superior in importance. If previous in time, the question is whether *Homo sapiens* began at some point during the course of his evolution to lose the biological equipment that permitted him to survive as an individual (to have his claws turn into nails, to have his instinctive responses begin to atrophy, etc.) and thus was forced, in order to survive as a species, to develop social modes of life or whether it was the development of social modes of life that made claws, instincts, etc., unnecessary and therefore led to their evolutionary disappearance. If "prior" is taken to mean of superior importance, the question is whether the society exists for the benefit of the individual, as American philosophers usually contend, or the individual exists for the benefit of the society, as the German metaphysicians and political ideologists have claimed. A great deal has been written for and against each of these views, but without profit; for all such discussion is equivalent to the futile debate over the priority of the hen or the egg.

The verifiable fact is that all human beings have been born into and inducted into some sort of society. Legend to the contrary, there is no authenticated instance of a human infant who has survived on his own or has been brought up by wolves, apes, or any other lower animals.¹ The human infant is so completely helpless and remains helpless for so very long that he must be given constant and considerable care for a considerable time and the kind of care that only human beings can provide. Human beings presuppose a society, for all human beings were born helpless infants and had to be taken care of and taught the ways of human beings. Conceivably, a mother alone and on her own in the wilderness might bear and support a child. She would, nonetheless, be serving

¹ The latest of the many attempts to validate the ancient legend of wolf children are A. Gesell, *Wolf Child and Human Child* (Harper, New York, 1939); and J. L. Singh and R. M. Zingg, *Wolf Children and Feral Man* (Harper, New York, 1942). For criticisms of the data on wolf children, see W. Dennis, "The Significance of Feral Man" (*Amer. J. Psychol.*, vol. 54, pp. 425-432, 1941); and J. P. Foley, Jr., "The 'Baboon Boy' of South Africa" (*Amer. J. Psychol.*, vol. 53, pp. 128-133, 1940).

her child as the representative of the society from which she learned how to live in the wilderness and to bear and to rear a child. Actually, there are always a number of people, blood relatives or otherwise, who contribute directly to the rearing and training of a human infant. And in a complex modern society there are many people, the farmer, the milkman, the druggist, etc., who indirectly contribute to his care and protection, and many others, the teacher, the radio storyteller, the newspaperman, etc., who indirectly assist in his training.

The individual is, then, totally dependent for his survival upon the existence of some sort of society. But it is equally true that there would be no society were there not also individuals to behave toward one another socially. Although no single human being is essential to the maintenance of a society, a continued birth and induction of individuals into the social group are necessary, or the group will in time die out and its society disappear. In order to understand the existence of any society, large or small or primitive or modern, it is thus necessary at the outset to understand how a group inducts its incoming members, how it makes human beings out of human animals and in the process transmits the group modes of living from generation to generation. Moreover, in order to understand how a social system may undergo changes through time, it is first necessary to understand how a social group may inadvertently so maltrain some of its incoming members that they attempt to modify the society into which they were born.

THE GENETIC VS. THE SOCIAL HERITAGE

The Genetic Heritage.—At the moment it is conceived, the human animal acquires a vast complex of biological potentialities. These are determined by the genes, the carriers of the physical traits, of its parents. This genetic heritage, whatever it may be, is fixed at conception; and nothing that happens to the organism thereafter can in any way increase its genetic potentialities. The human mother may think beautiful thoughts, pray, or otherwise endeavor to assure that the embryo will develop into a golden-haired girl. But if the genes have established a male organism, the infant will be a boy; and if they have established straight, black hair, his hair will be straight and black.

That the genetic potentialities of human organisms differ widely no scientist doubts. But the genetic potentialities are not actualities. The genetic factors merely set the biological limits within which nongenetic factors operate to produce a human being. Insofar as sex, skin color, nose shape, and some other physical attributes are concerned, the genetic potentialities of the organism appear to be fully and directly expressed. Most of the genetic potentialities, however, cannot be deduced from the

actualities; they cannot, in fact, be ascertained by any known means.¹ Even such a gross characteristic as body weight cannot be taken as an indication of genetic possibilities, for food and many other factors enter into the determination of the individual's stature. For all that can be known, a little man might have had the genetic potentialities for becoming as big as a big man. From the fact that a woman is small and frail all that can be deduced is that she was genetically destined to be a female; she might, for all that can be known, have had the potentialities to grow into a strapping farm hand.

Ability to learn is in most respects the most important of the genetic potentialities of a human animal, for it is by learning that he becomes a human being. But from the kind of human being he is nothing can be deduced concerning his innate ability to learn except that he obviously had the potentiality to learn whatever it is that he has learned. The fact that he has learned to be a Bantu tribesman rather than an American or an uncouth beggar rather than a rich gentleman signifies nothing, however, about his genetic potentialities. For his innate ability to learn has been only one of many variables that have determined what and how much he has learned, *i.e.*, what kind of human being he has become.

The Social Heritage.—In addition to his genetic heritage, whatever it may consist of, the future human being inherits a society and a place in that society. There is, however, no constant relationship between the genetic and the social heritage. For, unlike the genetic heritage, the social heritage is not fixed at conception. The laws of genetic inheritance are biological and are not subject to human machination; those of social inheritance, on the other hand, are man made and subject to human control. Whereas a mother can do nothing to change the genetic heritage of her newly conceived child, she may through folly or ignorance deny him sufficient calcium to develop a strong bony structure and sound teeth or, through failure to fulfill certain socially prescribed rituals, stigmatize him as a bastard. Likewise, through ill fortune or incompetence a father may lose the fortune and social status that his infant might otherwise have inherited.

The social heritage determines the extent to which the genetic potentialities will be developed. It is determined by the number, the character, the social status, and the relationships of the people into whose presence the infant is born (or by whom he is adopted), and the status that he is accorded by them. The specific nature of the social heritage depends upon the time, the place, and the circumstances of birth. The

¹ Much effort has gone into the attempt to devise some means of measuring genetic potentialities, particularly innate ability to learn. For a time it was thought that intelligence tests, such as the Stanford-Binet, did so. It is now recognized that these tests measure the product of innate ability to learn and social opportunities and incentives to learn and do not ascertain the genetic factor alone.

social heritage of the boy who was born into medieval society was quite different from that of the boy who is born into one of the modern European nations; and the social heritage of the modern European is quite distinct from that of the modern American. The son of a farmer inherits many things that the son of a townsman lacks, and vice versa; and the son of a rich man inherits much more in status and worldly goods than does the offspring of a slum dweller.

Environment.—The social heritage constitutes the initial environment into which the individual is born. That environment will invariably change in some respects during the course of time, if only in that the people around the individual grow older and die off with the passage of years. The environment may also change rapidly and significantly in other respects. The peaceful world into which he was born may sooner or later become a world at war; his impoverished parents may become rich or his rich parents become impoverished; he may lose one father and acquire another; his family may leave the farm and settle in town or migrate from the country in which he was born to some other land. Moreover, as he grows older and more competent, he may himself effect a change in his environment, perhaps by leaving home to go to college or to go to work in another place.

In general, however, the environment of the individual throughout his lifetime stems directly from his social heritage. If he is born into a Bantu tribe, he will most probably live and die a Bantu; if he is born an American, he will probably live out his life in America. The relationship between the social heritage and the environment is not fixed and unvarying, most particularly in dynamic societies such as those of today; but it is ordinarily close. The boy born to poverty has a bad start toward becoming a rich man, while the boy born to riches has everything in his favor. Whereas the genetic heritage and social heritage may be negatively related, for the poorest of genes may have the finest of social heritages, and vice versa, the social heritage and the environment are rarely opposed.

SOCIALIZATION

Rigidity of the Environment.—The human infant is adaptable and could learn to behave in almost any way, but the human beings who constitute the most important element of his environment behave in comparatively fixed and highly standardized ways. The human infant, for example, has no food tastes; he could as well learn to like boiled rat as baked pig, earthworms as chicken, mare's milk as cow's. But the persons into whose presence he is born, with whom he will live, and upon whom he is wholly dependent have very limited and stable food habits. Nor does the infant have any personal preferences; anyone who will feed him is worthy of his "love." But in most societies the woman who bore him will have

a special claim to his affections and will preempt his time and attentions. As an animal, the youth could mate with any female of childbearing age; but long before the infant has grown into a youth, he will have discovered that those around him have well-defined and very limited ideas of when and with whom he can engage in sexual activities.

Since he is pliant and his environment is rigid, the human animal adjusts to his environment through the years of his infancy, childhood, and youth. He learns in a variety of complex ways to behave in the modes deemed by those around him to be right and proper for one of his status. He learns to drink cow's milk, if such is the social preference, and like it; to say "milk" and not something else when he means milk; to love and cherish as a mother the woman who bore him; and to accept as a mate the girl who as a consequence of some sort of social procedure becomes his bride. The ways by which he is taught to do these things constitute the processes of socialization, and what he learns is what in the end characterizes him as a human being. For all that is human about a human being, his language, his observance of the proprieties, his sentiments, his faiths, his very desire to live with and in accordance with his kind, he acquires through experience with the members of his society.

The Processes of Socialization.—The processes of socialization are the primary concern of the social psychologist and need not be described in detail here.¹ Necessary to the understanding of contemporary sociology, however, is the realization that the behavioral characteristics that distinguish the human being are products of socialization rather than of biological inheritance. From the moment of birth until the moment of death the individual is both encouraged by the people around him to learn the modes of conduct that are deemed appropriate within his society for one of his status and discouraged from learning anything else. In its simplest form socialization consists of rewards, which may range from a piece of candy to election to high office, and punishments, which may range from a spanking to imprisonment. All such rewards and punishments are administered by persons; but these persons reflect the values, sentiments, and practices of the society that they represent. They are many and he is one; they are fixed in their ways while he is at the outset plastic. Thus in the course of time he learns to conform to them; and as conforming becomes habitual through repetition, he acquires the behavioral characteristics of a human being.

¹ For detailed analysis of these processes, see C. Bird, *Social Psychology* (Appleton-Century, New York, 1940); S. H. Britt, *Social Psychology of Modern Life* (Rinehart, New York, 1941); L. G. Brown, *Social Psychology* (McGraw-Hill, New York, 1934); R. T. LaPiere and P. R. Farnsworth, *Social Psychology* (2d ed., McGraw-Hill, New York, 1942); and K. Young, *Social Psychology* (2d ed., Crofts, New York, 1944).

Social Motivation.—Socialization is an interactional procedure, for the individual plays an active rather than passive role. He is not shaped by his environment as clay is shaped by the potter for, like any other animal, and in more complex and variable ways, the human individual is physically active. Whereas the clay adjusts supinely to the potter's fingers, the human animal presses against them, seeking to go this way or that. Thus what and how much he will learn as he grows to maturity depends in part upon what he tries to learn and how intense is his endeavor. He cannot learn to do what he does not try to do. Unless he tries to make noises, he cannot be taught to speak; unless he ventures about the house, he cannot be taught to live in the house in the manner of a human being. The character and intensity of motivation, the internal drives to action, are therefore an important factor in the learning of social modes of conduct.

The drive to action is initially organic. Hunger pangs induce such outward activities as squirming and, perhaps, whimpering. The need to eliminate body wastes leads to their being unembarrassedly eliminated. Any pain or discomfort, however produced, stimulates the human animal to random, and mainly futile, activities. As his body matures, he learns to crawl and then to walk. And once mobile, there is no end to the things he may do, or try to do, if given the opportunity. But in the meantime, his organic drives to action will have been somewhat channelized and repressed and given social elaboration. He will have learned because of the treatment accorded him in a thousand previous instances not to squirm and whimper when he is hungry but to say, "I'm hungry!" He will have learned that there are stated times and occasions for the release of body wastes and that the immediate wants of the body must be subordinated to the "want" for social approval. The want for social approval will itself have been learned. It is one of the most complex of the wants of the human being and involves the substitution of social stimuli for organic ones. The newborn infant wants nothing more complex than food. Soon, however, he comes to want the presence of his mother as much as the food that she normally provides; and before long her presence will have become as desirable as food. Through a continual extension of this process, the growing child acquires an increasing number and variety of wants. Thus by their treatment of him, those around the individual gradually succeed in replacing the very few organic drives that he initially had with a complex of socially instilled motives.

The number, character, and intensity of the motives that an individual acquires will depend upon his society, his status within that society, his sex, and the accidents and incidents of his socialization. In some societies the individual is discouraged from acquiring many "wants" and from

wanting anything very intensely. In other societies, notably contemporary Western ones, the general tendency is to encourage the acquisition of many motives of strong intensity.¹ Ordinarily the motives that are considered appropriate for a male are quite different from those deemed desirable in a female. In most societies a man may want a wife and a woman a husband; but no man should, although some may, want sexual association with a male, and no woman with a female.

The motives that the individual acquires limit the range of his activities and direct his efforts to learn into specific and socially approved channels. The small child has no ambitions, in the adult sense; he wants everything and anything that comes to hand, and he drops each thing with great rapidity. His actions are general and diffused; they are not directed by internal drives toward some major and distant end. As the child matures socially, however, he learns to want to be like this or that specific person—first, perhaps, like his mother, and subsequently like his father, his elder brother, or the boy who lives down the street. Ultimately his ambitions may enlarge to include wanting to become tribal chief, king, or president.

Imitation.—The desire to be like some other person, which is actually a desire to secure the satisfactions that that other person presumably enjoys, is the basis for one of the major processes involved in socialization. This process is commonly termed “imitation,” although the phrase “learning by human example” is more descriptive.² It consists of using some person as a model or pattern and endeavoring to copy the behavior of that person or some aspect of it. The net result is a channeling of the learning endeavors of the imitator and, hence, an acceleration of his learning. When he is assiduously trying to be “like father,” the small child is assisted by his father’s example in learning to do some of the things that his father does and is at the same time distracted from trying to learn to do other things. Many years and many models later, the same individual may be helped in learning to become a hunter, fisherman, baker, or banker by using such a person as a model.

By encouraging him to use appropriate persons as models and at the same time discouraging him from using inappropriate persons, those around the developing child attempt to assure his acquiring the modes of behavior that are proper for one of his status in the society. In many societies, including our own, the boy who clings too long to his mother’s

¹For some striking contrasts in the social motives of primitive peoples, see M. Mead, *Cooperation and Competition among Primitive Peoples* (McGraw-Hill, New York, 1937).

²Imitation was once considered to be instinctive, *i.e.*, a mechanical and biologically impelled reproduction of the behavior of others. For a detailed analysis of the social antecedents and nonautomatic character of imitation see N. E. Miller and J. Dollard, *Social Learning and Imitation* (Yale University Press, New Haven, 1941).

apron strings (a folk way of describing the use of the mother as principal model) will, for example, be teased and otherwise discouraged, while any tendency that he shows to emulate the behavior of his father will be encouraged. In most societies more or less deliberate use is made of the propensity of the child to imitate, a fact that is most clearly revealed by the social provision in myths, legends, and stereotyped children's stories of appropriate symbolic models.

The child's environment of persons is always supplemented by a variety of symbolic persons—*i.e.*, dead, distant, or fictitious people, created for the child by the storytelling or conversation of actual persons. In most households, for example, there will be recurrent, however casual, discussion of the merits of distant or deceased relatives and of the great men of the past and the present. Moreover, the child's mother and others may tell him simple stories that point the desirability of behaving like the story hero or heroine and the disadvantages of behaving like the story villain. From these sources the child may acquire a symbolic model that helps him to learn to do something that is not demonstrated by any one of the actual persons within the orbit of his direct experience. In the modern Western world the symbolic models that are brought to the child by direct word of mouth are perhaps less important than those that are brought to him via radio, comic magazines, motion pictures, and the other modern modes of communication. The models drawn from these latter sources account in part for the fact that the modern child is much less likely in later years to "follow in his father's footsteps" than was the child of a century ago.

Although the consequences of imitation are most apparent during the early phases of his socialization, there is always some resort to the use of models throughout the individual's life. Even on his deathbed an old man may hide his pain and repress his fear because he has long since learned to believe that brave men show neither pain nor fear and because he wants, even in dying, to be a brave man.

Social Roles.—In any society, the behavior that is deemed appropriate for a given individual depends upon the individual's age, occupation, marital status, and class position. What is expected of the child is both different from and less than what is expected of the adult; what is expected of the woman is always somewhat different from what is expected of the man; what is expected of the lord is different from what is expected of the serf. Invariably, therefore, the member of any social group is in a position somewhat analogous to the actor in a play: he has been assigned a detailed and specific social role in terms of his various qualifications and is judged by how well he plays that role. The individual does not, however, remain in the same role throughout his lifetime. At birth he is assigned a role in terms of his sex, class, and, perhaps, the

occupation of his father. Shortly, however, he enters on a series of roles, each somewhat different from the preceding one and each progressively more complex. These are the roles that change, for both sexes and all classes, with advancing age and with changing marital and parental status. There is, thus, no end to socialization, no point at which the individual becomes once and for all a human being. He is always and in all societies forever being socialized, forever in the process of becoming human.

In rapidly changing societies, such as our own, the individual may improve upon the normal series of roles by his own efforts and through such means as migrating from one region or society to another, by changing from one occupation to another or from one position in his occupation to a better one, and by moving upwards in the class scale. Moreover, in such societies a marked change in his social role may be forced upon the individual by circumstances entirely beyond his control, as is the case when the advent of war converts him from civilian to soldier or when a disturbance of the economic system reduces him from a man with a job to a man out of work. Any forced change in his social role necessitates his learning as best he can to conform to the requirements of the new role; and his success as an individual is measured largely by how well he does so—how well he adapts to his environment in terms of his special place in it.

HUMAN NATURE

The processes of socialization are not simple, nor do they operate with mechanical exactitude even in the most rigid and inflexible of social systems. Many factors, mainly subtle ones, are involved; and all are subject to wide variation and none to complete control. As a consequence the best of families may nurture a wayward child, and the most integrated of societies will occasionally produce a sport. The chances are, however, that the more consistent and uniform the behavior of the persons who surround the human animal, the more probable it is that he will acquire human attributes that are like theirs. If all of them speak Yiddish, he will certainly learn to speak this tongue or none at all; if they all have a strong preference for pork and a marked distaste for beef, he most likely will learn to prefer pork to beef; if they all believe in ghosts, he will undoubtedly learn to believe in ghosts; and if they are all characteristically content with a bare livelihood, he will no doubt learn to be satisfied with just sufficient to maintain life.

When all the incoming members of a social group—those born to and reared by the adult members—are subjected to uniform and consistent treatment and are provided with similar examples and encouragements to learn, the patterns of behavior that they will acquire will tend to be

similar. Those behavioral attributes that they have in common with one another and that they share with the older members of the group constitute what is generally described as their human nature.

A Misnomer.—For the members of each social group, to be human is to behave in the ways common to that group. The fact that the individual member must learn those ways is generally overlooked, for they are a part of his birthright and hence appear natural for him. The idea of the naturalness of human nature is embodied in countless folk sayings and beliefs, which are but reflections of the fact that in every society the newborn is expected to become like the members of that society and will be rapidly socialized into conforming with the local concept of what constitutes being human. Many social philosophers, from Aristotle to McDougall,¹ have, however, taken seriously the folk idea of the naturalness of human nature and have assumed that it is a part of the genetic heritage of the individual. In this view, society is only the sum of the innate behaviors of the members of the group.

Social psychologists are now agreed that human-nature attributes are invariably acquired. The term "human nature" is in fact a misnomer, but it is so deeply imbedded in our vocabulary that it is perhaps easier to redefine the term than to dislodge it and supply a new and less misleading one. In the first place, human nature is not an entity, something that an individual has or fails to have, like straight teeth or curly hair. In the second place, it is anything but natural.

As Normative Behaviors.—No two human beings ever behave exactly alike, even though they are members of the same social group and their behavior is comparable. No two Americans say "Hello" with quite the same tone of voice, intensity, inflection, etc. Nor do any two Chinese say "Ch'ing-tsuo" in an identical fashion. But upon encountering friends and acquaintances Americans do generally say "Hello" in some way or other and Chinese do say "Ch'ing-tsuo." Similarly no two Americans may use a knife and fork in quite the same way, and no two Chinese may handle their chopsticks in exactly the same mode. But when they eat a meal, Americans do generally use a knife and fork and Chinese do generally use chopsticks. A study of the greeting behavior and eating habits of a large number of Americans and a large number of Chinese would, thus, reveal two things: each of these peoples has its own normative way of greeting friends and its own normative way of eating food, and the ways of these two peoples are strikingly different.

The total of all the normative ways of the members of a social group constitutes human nature for that group. Thus those behaviors of the individual member that approximate the norms are by *social definition*

¹ W. McDougall, *An Introduction to Social Psychology* (Methuen, London, 1908).

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his human-nature attributes. As an individual he may possess many such attributes or relatively few. Probably no single individual will in all or even in any large number of circumstances behave exactly in the ways that are normative for his group. It is, therefore, impossible to select one individual from a social group and say of him, here is a person who manifests the human nature of this society. Although any individual would tend to adhere to the norms, he would deviate from them in many respects.

The concept of human nature is complicated by the fact, already referred to in different terms, that there is no single set of normative behaviors for all the members of the society. Each sex, age, occupational, class, and other group within the larger society has something of its own special set of normative behaviors. Moreover, each of the various individual roles within such groups has its own particular set of ways. And since the individual shifts his role from time to time, what will be considered as an attribute of human nature for him at one time may be regarded quite differently when he moves into another social role. It may be human nature for the small child to suckle at his mother's breast, but it is human nature for the adult to procure his nourishment in some very different way.

Human Nature and Society.—Some sociologists have restricted the use of the term "human nature" to those presumably universal sentiments, ideals, and values that are acquired as a consequence of the fact that all human beings have of necessity been born to and nurtured by other human beings. While this restricted use of the term is of course permissible and bears no resemblance to the erroneous folk idea that human nature is natural, it has not proved very fruitful.¹ Such universals, if they exist, are entirely subjective—i.e., they are internal feeling-states, mood tones, and mental processes—and can only be inferred from outward behaviors. There are of course some few things that are true of all men at all times: all men must eat to live, protect themselves from the elements, procreate, care for and train their offspring, communicate with one another, and participate as members of social groups. But as to how they accomplish any of these things—what they eat, how and when they eat it, how they procure what they eat, etc.—nothing can be said that holds true for all peoples at all times.

The fact is that human nature and society are simply different ways of regarding the same thing—the norms of the behavior of the members

¹ Still the best statement of human nature as the universal product of primary-group life, whatever the form of group organization, is C. H. Cooley's, *Human Nature and the Social Order* (Century, New York, 1902). Compare his statement of the concept with that made thirty-two years later by C. H. Cooley, R. C. Angell, and L. J. Carr in *Introductory Sociology* (Chap. IV, Scribner, New York, 1933).

of a social group. In the one instance attention is on the individual member of the group and how he came to behave in the ways that he does. In the other instance attention is on the relationships of the members of the group. Human nature, that of each individual member of the group, is the individual expression of norms which, when viewed abstractly and through time, constitute the society of which the individual has through socialization been made into a constituent part. Any distinction between human nature and society is, thus, no more than conceptual.

INDIVIDUALITY, INDIVIDUAL INITIATIVE, AND SOCIAL CHANGE

It is through the establishing of human-nature attributes in its incoming members that a social group maintains and perpetuates its social system generation after generation. Human nature is thus the stabilizing, conservative factor in group life. If every new member of a group were thoroughly socialized into the group norms, the society would remain unchanged through time. But, as was indicated earlier, all societies are constantly changing in some way and to some degree; for no society ever succeeds in thoroughly socializing all its incoming members. Each member has some individuality; *i.e.*, he deviates to some extent from the norms of the group into which he was born and by which he has been socialized.

Whether any specific behavior is an attribute of individuality or of human nature depends upon what the norm is for the particular group. Whereas it is a human-nature attribute for an Eskimo to prefer blubber to cheese, a similar preference would be an attribute of individuality in an American, since such a preference would be a violation of the American's social training. Whereas it is human nature for middle-class American males to want to improve their economic status and to strive to do so, the same desire would be atypical and, hence, an attribute of individuality in a member of certain primitive societies.

The distinction between individuality and human nature is not, then, what the behavior is but how the behavior came about. The human-nature attributes of an individual are the successes of socialization. Whatever individuality he may evidence is, on the other hand, a consequence of faulty or incomplete socialization, the failure of the group to train him into full acceptance of his designated social roles. Attributes of individuality are the most important of the forces that erode away a social system and make for the replacement of antiquated practices with new and more effective ones. To the extent that the group has failed to induct him into the social ways, the individual is "free" to work out his own individual ways; and there is the possibility, however small, that in work-

ing out his own ways he may devise a mode of action that will be adopted by others and will gradually become the norm. All invention and all discovery stems from individuality; and, as will be indicated in the following chapter, it is through invention and discovery that social changes occur.

Individuality a Deviation in Degree.—Social changes do not come about radically or abruptly. Even revolutions are but critical phases in slow and fragmentary change. On the individual level, the reason why social change is gradual is that attributes of individuality are deviations in degree rather than in kind from human-nature norms. Through faulty socialization a given person may come to like the music of his society more or less than is normal; if less, he may be led to experiment with it. But he will hardly escape so completely from his society that he will invent an entirely new kind of "music"; at the most he will devise a variation on the conventional forms. For everything that he knows about the making of music and whatever he may like in the way of music has of necessity been socially derived, a direct or inadvertent product of his socialization. The same principle holds true for every phase and aspect of society. Even the most irresponsible of dreamers is so much a part of and so little free from the society of which he is a member that his dreams of making society anew will be no more than extended, and perhaps addled, versions of traditional dreams of the social future.

An attribute of individuality is not only a difference in degree rather than in kind from the social norm but is also specific rather than general. An individual may like the conventional music less than is typical for the members of his group yet be more or less typical in his liking for other art forms, in his food and dress tastes, and in his religious and other beliefs. The social radical may be radical only in some one or in a few regards, the eccentric may be highly conventional except in one specific phase of his life, and even the wildest dreamer may be a satisfactorily practical husband and father. As a consequence, the contribution of any individual to social change is limited in scope as well as in degree. A given individual may make some small modification in the traditional music of his society; it is unlikely that he will also make comparable modifications in the realms of pictorial art, literature, religion, and the modes of group organization.

Individual Initiative.—Individual deviations from the social norms do not necessarily have social significance. Although every social group makes many mistakes in socializing its incoming members and every human being consequently possesses some attributes of individuality, most of the individual deviations that occur within the membership of the social group are socially of slight importance. They add to the color

and provide the subtle overtones of group association, they give the members something to talk about, and at the worst they lead to passing misunderstandings and irritations. Thus the fact that one American coyly persists in answering the telephone with an "Are you there?" in the English manner, will hardly lead to a modification of the conventional "Hello." Likewise, the fact that one man failed to learn respect for the eighth commandment and learned instead to live on the produce of his neighbor's fields will hardly lead to the general abandonment of agriculture and the adoption of brigandage. Moreover, the expression of any attribute of individuality is subject to social checks, with the consequence that a person who might contribute to some change in his society is often persuaded or coerced into repressing all outward signs of individuality and into conforming outwardly to the established ways.

Only a few of the many attributes of individuality that appear in the members of a social group are sociologically significant. Designated as "enterprise" or "individual initiative," these few are commonly considered to be a single attribute. It must be realized, however, that initiative, the term that will be used here, is not one kind of human behavior but is, rather, a combination of particular attributes of individuality. No one of these can of itself lead to significant changes in society, and the combination of them can do so only under particular conditions.

Atypical Motivation.—In each social system there is a normative level of individual motivation for each of the various aspects of life—a normal intensity of desire to marry upon reaching maturity, to become a father, to produce material goods, to secure or improve social status, etc. When, as a consequence of malfunctioning of the socializing processes, any considerable number of the members of a group are hypomotivated, *i.e.*, less than normally motivated, in respect to many aspects of life (and in terms, of course, of the normative levels of motivation for that group), the vigor of the society diminishes, the established social practices or some of them fall into disuse, and in extreme instances the population numbers decline and the standard of living falls off.¹ A gradual increase in the numbers of hypomotivated individuals was undoubtedly involved in the historic decline of the Greek city-states and of the Roman Empire; and it has been an important factor in the eclipse as world powers of such modern nations as Spain and, more recently, France.

Conversely, whenever any considerable number of the members of a social group are hypermotivated, *i.e.*, more than normally motivated, in

¹ Other factors, such as deterioration of the level of health and prolonged social adversity with resulting demoralization, may have the same consequences. The prevalence of hookworm and the use of devitalized corn meal as a major item of diet are, for example, important factors in the social apathy of the so-called "poor whites" of our South.

some particular direction, technological, religious, economic, political, or military, the entire society tends to be energized, stimulated, and activated. In lay terms, it is the excessively ambitious, the greedy, the curious, and the discontented who try to change things and who in trying to do so may succeed in disturbing the whole society. In medieval Europe, for example, the appearance of increasing numbers of hyper-motivated men, such as Copernicus, Galileo, and Cellini, to name but a few, was one of the factors that led to the exploration of the globe, the development of the scientific spirit and scientific knowledge, the improvement of productive methods and transportation devices, and the thousand and one other changes—including large-scale warfare and organized crime—that in time became characteristic of the modern Western world. In the centuries since these changes began to appear, the normal level of social motivation has moved constantly upwards; and in certain realms of contemporary societies change has become the normal rather than an abnormal condition.

Hypermotivation and Social Disequilibrium.—Although hypermotivation of the members of a society is a force making for social change, social change cannot be explained in terms of hypermotivation—or of any other attribute of individuality, for that matter—any more than social stability can be explained in terms of human-nature attributes. Hypermotivation that is sufficient, both in character and in intensity, to produce changes in a social system arises only when that system is already in process of change, *i.e.*, only under conditions of social disequilibrium. Analysis of the sources, the nature, and the consequences of social disequilibrium will come later. At this point it need only be noted that while hypermotivation is often the *modus operandi* of social change, it is never the cause. A society that has for whatever reasons begun to change fails to establish normal motivations in some of its members. Of these, some will become hypomotivated and operate as a drag on the society. Others will become hypermotivated; and if there are enough of them and they are driven into creative activities that in turn make for further changes in the society, social changes will tend to snowball.¹

Originality.—A person hypermotivated in some aspect of life expends more energy in and devotes more time to that aspect of life than is normal for the members of his society. Such excessive activity may, however, result only in his doing more of what he has learned to do or doing it more often. Thus an overly ambitious craftsman may simply make more shoes each day than is customary for the members of his craft. He and

¹ For an analysis of the literature on this subject, see H. Cantril, *The Psychology of Social Movements*, Chap. 2, Motivation in Social Life (Wiley, New York, 1941).

others like him might work some quantitative changes—more shoes, more children, bigger crops, larger houses, more and more destructive wars.¹ But they do not induce qualitative changes—stronger or more comfortable shoes, healthier children, more nourishing food, more convenient and sanitary housing, or more successful wars. Qualitative changes presuppose creative activity as well as hypermotivation. And creative activity in turn requires opportunity to experiment, interest in experimenting, and the skills necessary if experimentation is to be productive.

Opportunity to engage in social experimentation depends on the social system itself. In medieval Europe opportunities were few; in contemporary Western societies they are by comparison many. Interest in undertaking any experimentation and the skills necessary for doing so are socially, if somewhat inadvertently, acquired. Together they constitute originality. In no sense inherent in the nature of the individual, originality, like the hypermotivation that it may satisfy, is a by-product of inadequate socialization. Its appearance is, therefore, associated with a state of social disequilibrium rather than one of social stability. During the thousand and more years prior to the seventeenth century, when Chinese society remained relatively stable, no Chinese scholar contributed a significantly new idea to the scholarly heritage of China, and no craftsman contributed an important addition to the heritage of tools and manual skills. No doubt exceptionally ambitious scholars and craftsmen produced more than their fellows did; but what they produced was only more of the same things in the traditional ways, for they had neither the opportunity to experiment with new methods of production or new products nor the willingness and skills to do so.

Mental Skills.—Some creative achievements are the result of manual experimentation. By trying various and unconventional methods of holding his knife, for example, a craftsman may hit upon a better way to cut his leather. Manual experimentation is, however, facilitated by thinking; and in nonmanual fields of endeavor, such as finding a better way to navigate a ship, designing a more efficient knife, or working out a problem in military tactics, thinking is imperative.

Thinking is not to be confused with rationalizing, the common practice of justifying behavior by reference to some stock argument or belief. Rationalizing is a sort of verbal ritual that is attached to what is going to be done or what has already been done, but it does not affect the doing; and, while it is much more complex, it is no more creative than is

¹ A very considerable proportion of the great men of history have become great in this manner. The tendency to judge the worth of a man by the number of his productions—e.g., to judge a scholar by the number of books and articles he has published—rather than by their quality is not peculiar to the present age.

the song of the thrush. Thinking is symbolic, as distinct from manual, trial and error. It is an experimental process conducted with symbols of things, mainly verbal ones, rather than with those things themselves. To think out a problem is to reduce that problem to symbols (many problems, such as mathematical ones, are themselves symbolic) and to attempt to solve the problem by mental manipulation of those symbols.

Mental skills, like manual skills, are highly specific. A mathematician may be utterly incompetent as a military tactician, an economist incapable of keeping his financial affairs in order, and a shrewd businessman may arrive at disastrously fallacious conclusions when he "thinks" about the feasibility of taking a certain woman for his wife. Although ability to learn is a biological inheritance (none of the lower animals evidence much of this ability) and presumably varies from individual to individual, mental skills are socially acquired.¹

In order to do any thinking, *i.e.*, to develop any mental skills, the individual must first be provided with the tools for thinking—language and its supplements—and these are of social origin. Some societies have had relatively few such tools, and most of those dull and inexact. Much of the so-called "thinking" of the Middle Ages, for example, involved the use of such empty words as "angel" and such concepts as that of the divine right of kings. Other societies, our own for one, provide very extensive and flexible, if not perfect, sets of verbal tools. Not only must the individual be provided with the tools for thinking, but he must also be taught to use them. Almost everyone learns to speak the language of his society; few persons, however, learn how to work out something new to say. Like manual skills, mental skills are acquired only through practice, whether they be skills at thinking out problems in chess, in musical composition, in mathematics, in finance, or in some other realm. Many societies have not only failed to encourage the individual to practice thinking for himself but have systematically discouraged his doing so. And even in a society such as our own, where originality, particularly in the field of technology, is greatly admired, only a very small proportion of the members are given the opportunity and instilled with the desire to become mentally skilled in any field of endeavor. The vast majority learn to talk and even to read, after a fashion, but it is the exceptional individual who happens to acquire both the hypermotivation and the originality that together make for individual initiative.

¹ The acquisition of mental skills has been ignored by those of the psychologists who were bent upon defending the class *status quo*, notably F. Galton (*Hereditary Genius: An Inquiry into Its Laws and Consequences*, Macmillan, New York, 1892) and such modern disciples as L. M. Terman (*Genetic Studies of Genius*, Stanford University Press, Stanford University, 1925) and G. C. Schwesinger (*Heredity and Environment*, Macmillan, New York, 1933).

PERSONALITY

In folk use the term "personality" is either synonymous with personal charm or else is used to evaluate the person as an entity; e.g., "he has an unpleasant personality." In sociopsychological usage, the personality of the individual is his particular combination of human-nature and individuality attributes. Pertinent to sociological concerns are two interrelated and socially significant facts: the personality of the individual is but one factor in the interaction that results in behavior, and that factor is an infinitely variable one.

The Uniqueness of Personality.—Even in the simplest of social systems, there are tens of thousands of things that an individual must learn in the process of becoming human—many hundreds of words that he must learn to use and to respond to, many specific food tastes and dress habits, many different ways of adjusting to the various persons with whom he associates, etc. For no two individuals will the conditions under which all these things are learned be quite the same. The social heritages even of children born of the same parents are somewhat different; and for no two children will the environmental influences follow identical patterns.¹ Moreover the individual himself plays a part in the learning process, and any small differences in learning may be magnified in the course of time. Finally, as has been indicated, a great many accidents and incidents enter into the socializing of the individual. All these variables assure that no two individuals will ever learn all the things that must be learned during the course of the years in quite the same way. Each will acquire a somewhat, if only slightly, different combination of human-nature and individuality attributes. Thus, just as two persons never look exactly alike, no two persons have identical personalities.

The uniqueness of an individual's appearance and personality is generally apparent to his intimates; parents can distinguish between like twins, however much they look and dress alike; and a husband can pick out his wife from among any number of women just by the unique characteristics of her voice. The uniqueness of the individual may not be recognized, however, by strangers or mere acquaintances. Strangers and acquaintances tend to put one another into personality type categories and then to treat one another in terms of the personality stereotypes. Some very significant social phenomena, such as racial and class discriminations and conflicts and even wars, involve stereotyping of this sort. Commonly ignored in the relations of group vs. group is the fact that a Negro is not just a Negro, a Communist a Communist, or a German a German. Each is as a human being unique, and to put him into a type category inevitably does violence to the facts.

¹ See E. M. Abernathy, "Further Data on Personality and Family Position" (*J. Psychol.*, vol. 10, pp. 303-307, 1940).

The Situational Factor.—The personality of a given individual may be regarded as the enduring products of all his past experiences—his store of manual habits, speech and gestural patterns, sentiments, values, attitudes, beliefs, motivations, and mental skills. These personality attributes constitute his preparations to behave in current and subsequent circumstances, but they are not behavior per se. Behavior is the product of an interaction between the personality and an external circumstance, usually designated as the situation. The attributes of the personality are latent, just as the explosive potentialities of TNT are latent; and they do not enter into the making of actual behavior until they are touched off in the appropriate situation. A man may be a great lover, but he will act lovingly only when a lovable woman and an opportunity to make love provoke him into action. He will probably not be a great lover to just any woman or even to a very lovable woman in public places.

Differences in the behavior of two individuals may thus be a consequence either of differences in their personalities or of differences in the situations in which they behave or of both. The fact that one man steals a loaf of bread whereas another buys his loaf may mean that the one is honest and the other dishonest. It may, on the other hand, mean only that the one was unable to purchase bread, and, being hungry, was tempted to steal, whereas the other had the money to enable him to stay honest. Likewise, the fact that a man is unhappy and discontented in his marriage relationship may not mean that his personality is such as to preclude his being happy and contented in marriage but may mean only that the particular woman he has for a wife precludes his being a contented husband.

From one point of view the personality of an individual is an organization or integration of attributes rather than a sum of them. The individual operates as a totality, not as one or another specific and independent habit system. Moreover, the individual does not in any way think of himself as a sum of separate attributes. In his own mind the various attributes of which his personality is composed are more or less effectively integrated.¹ That under some conditions he tells the literal truth and under others he tells more or less than the truth may not disturb him. That as an inventor he is always trying to change some things but as a husband, father, and churchgoer he is unalterably resistant to change may not seem to him at all inconsistent.

From the external point of view, however, manifestations of a given personality may appear highly contradictory, for that particular aspect of the personality that comes into operation is determined by the situation and varies with the situation. The man who acts kindly toward his

¹See G. W. Allport, *Personality: A Psychological Interpretation* (Holt, New York, 1937).

wife, his children, and his dog and is thereby judged a kindly man may, for example, be ruthless and brutal in dealing with his employees. As a consequence, it is impossible to generalize from what a person does in one situation what he will do in another. Ignored in personality stereotyping, this fact must be taken into account in any attempt at scientific analysis of social behavior.

Since behavior is the product of a particular personality in a particular situation, the personality of an individual cannot be looked upon as the "cause" of any individual achievement. Achievement in the realm of invention, for example, presupposes opportunity to invent as well as individual initiative. Because he never has time to devote himself to inventive endeavor, the man who could have been an inventor may invent nothing. Circumstances may, perhaps, force him to exhaust himself in the struggle to earn a livelihood for a large family. Because his wife dislikes all forms of music, the man who could have written a symphony, or at least tried to do so, may never make the attempt. Because his society does not during the course of his lifetime become embroiled in war, the officer who has original ideas on military tactics may never lead an army into battle. Conversely, anyone who does invent something or other, write a symphony, or become a famous military leader does so in part because the circumstances surrounding him are favorable. In any consideration of individual achievement it is therefore necessary to take into account not only the personality of the individual but also the situational medium in which that personality operates.

Psychological Tensions and Social Change.—Individual initiative and a favorable social milieu are the normal antecedents of social change. Under certain conditions, however, social change may involve the liberation of psychological tensions rather than the directing of hypermotivation into creative channels. The exact nature of these tensions is unknown; but their origins are fairly clear, as is their role in social change.

Although the individual is a product of his society, more or less serious opposition between him and some aspects of his society may sometimes arise. Peculiarities of his social heritage or environment may have led to his having been maltrained for one or another of the social roles that he is required to fulfill; *i.e.*, he may have acquired attributes of individuality that are incompatible with the circumstances in which he finds himself. The man who all his life wants to invent a better mousetrap, write a symphony, or lead an army into battle, but never gets the opportunity to do so, is at odds with his society; he experiences some degree of frustration.¹

¹ The idea of personal frustration as the antecedent of new forms of social action has been pushed to its illogical extreme by J. Dollard, *et al.*, in *Frustration and Aggression* (Yale University Press, New Haven, 1939). For broader and more

Opposition between the individual and his society may also come about as the consequence of a deterioration of the social system that results in a decline in the material and psychological satisfactions that he and the other members have become accustomed to expect. The personality attributes of the man who was born to and brought up in slavery will probably be compatible with the role of slave; but the man who is born to and brought up in political freedom will find the status of slave irksome and repressive. Under compulsion he may play the role of slave; but he will not like that role, and he will resent having to play it.

Any sharp and prolonged opposition between some aspect of the individual's personality and his society produces tensions, psychological forces somewhat analogous to the fatigue that accumulates in a piece of metal under repeated shock or sustained stress and that ultimately and abruptly leads to its disintegration. Under what are for him repressive and discouraging social circumstances, the individual builds up tensions that may in time and under provocation be released in sudden and unprecedented forms of action.

In that they may lead to new forms of action, tensions are comparable to initiative. But whereas initiative may lead to the kinds of behavior suggested by such terms as "a musical genius," "a great inventor," or "a successful businessman," tensions may express themselves in activities of the kind suggested by such terms as "a religious fanatic," and, when many individuals are involved, "a mob," "rioters," and "a mass movement." The kinds of social phenomena that under appropriate conditions result from tensions will be considered in detail later. At this point, however, it should be noted that, like initiative, psychological tensions are socially produced. They are by-products of certain kinds of social circumstances and may in turn contribute to the modification of those circumstances.

SOCIAL CONTROL

Individual initiative and, in more devious ways, psychological tensions are the personal forces that contribute to the making of social changes. Against these forces are arrayed those of social inertia and social resistance to change. Such resistance—whether the resistance of medieval societies to the ideas of the early scientists or the recent resistance to divorce, birth control, and countless other innovations—is in no sense an abstract or impersonal force. It is simply one aspect of the control that

cautious analyses of the effects of social change upon the individual, see T. M. Newcomb, *Personality and Social Change* (Dryden, New York, 1943); and K. Young, *Personality and Problems of Adjustment* (Crofts, New York, 1940). Other references to this and related subjects will be found in Supplementary Bibliography 3.

all organized social groups continually exercise over the individual members.

Every social group makes errors, great or small, in the socializing of its incoming members. These may be either errors of omission or errors of mistraining. The child may not be taught to speak respectfully to his elders, or he may be taught inadvertently to address them with disrespect; the man may not have been taught to till his fields industriously, or he may have been taught to till them in a fashion peculiarly his own. If they were adopted by the majority of the group, some few of the deviations from the established ways might improve the system of parent-child relations or the methods of tilling the soil. But in any fairly stable society all deviations from the established ways are deemed socially undesirable, and even in a dynamic society such as our own most deviations will be discouraged. The members of the social group expect each individual to behave in the ways prescribed by the social heritage and to live up to the particular roles that are socially assigned to him. Any marked deviation from these roles is considered a threat to the welfare of the group as a whole and subjects the individual to social reproof, just as the failure of an actor in the theater to follow his lines and adhere to the business of his role will invoke the disapproval of the other members of the cast and all those in the audience who know how the role should be played.¹

The social group controls the behavior of the individual member, even as it effects much of his training, by the meting out of rewards and punishments. Social control is a corrective for inadequate socialization. To the extent that an individual has been effectively socialized, he adheres to the appropriate social ways from force of habit.² To the extent that he has been inadequately socialized, he is inclined to behave in atypical ways; but he is forced toward conformity with the typical by the pressures of social control. The distinction is that between the "good" man and the man who is kept good by fear of what the neighbors will say.

When subtle means fail to secure conformity, the social group may resort to the meting out of crude and obvious forms of rewards and punishments. Thus an irreligious merchant may be denied the patronage of his religious fellow townsmen, or an unfaithful wife may be stoned

¹ Latitude is always permitted in certain minor phases of social life, such, for example, as the way that a hat is worn. Such minor phases are usually termed "folkways" in contrast to the "mores" or customs that must not be violated. For a general discussion of the various ways by which the individual is subordinated to group norms see P. H. Landis, *Social Control* (Lippincott, Philadelphia, 1939).

² Such behavior is, of course, everywhere supposed to bring some reward, usually ultimate and unverifiable. The good go to heaven, the bad to hell. The meek, it has been said, inherit the earth. Considerably more realistic as a description of social realities, however, is the saying that "virtue is its own reward."

by her shocked neighbors. Conversely, an exceptionally devout and pious merchant may be granted a more than ordinary share of business and an exceptionally proper wife and mother may be made chairman of the local P.T.A. in recognition of her virtues.

Controls of this crude and obvious character have historically been directed against almost every inventor and discoverer of record.¹ No doubt the man who first discovered that roasted meat tasted better than raw meat was driven from his cave by an outraged populace. Certainly Marco Polo was stoned and vilified for reporting his fantastic discoveries in China; most of the early scientists were damned as heretics and persecuted by townsmen and villagers alike; and until very recently any American who dared to suggest that the socioeconomic system might be improved was decried as a Red and, in many instances, subjected to violence.

As a Threat to Social Status.—In the main, social controls are, however, subtle and intangible; and rewards and punishments are meted out via the opinion, actual or anticipated, of the members of the community. Most human beings acquire from their association with other human beings a social sensitivity, a concern for their status in the eyes of friends, acquaintances, and even strangers. The members of the social group do not ordinarily need to stone or flatter the individual who is socially sensitive into adhering to his roles. The fact that any deviation from the established ways injures his reputation in the eyes of others is usually sufficient to deter him. Fear of loss of face is a typical human trait and is not limited to Orientals. Likewise, the prospect, however illusionary, that an exceptionally good performance of his role (e.g., being an unusually kind and devoted husband) will be noticed with approval may

¹ The following is a dramatized but hardly exaggerated statement of the sort of treatment that has often been accorded the social innovator:

"One of the most charming characteristics of Homo Sapiens—the wise guy on your right—is the consistency with which he has stoned, crucified, burned at the stake and otherwise rid himself of those who consecrated their lives to his further comfort and well-being so that all his strength and cunning might be preserved for the erection of ever larger monuments, memorial shafts, triumphal arches, pyramids and obelisks to the eternal glory of generals on horseback, tyrants, usurpers, dictators, politicians, and other heroes who led him, usually from the rear, to dismemberment and death.

"We bring you the story of the Boston dentist who gave you ether. Before whom in all time surgery was agony. Since whom science has control of pain. It is almost needless to tell you that this man, whose contribution to human welfare is unparalleled in the history of the world, was himself ridiculed, burned in effigy, ruined, and eventually driven to despair and death by the beneficiaries of his revelation."

From the Preface to *The Great Moment*, the motion-picture version by Preston Sturges of René Fülöp-Miller's *Triumph over Pain*. Courtesy of *Time*, copyright Time, Inc., 1944.

discourage any tendency the individual might have to turn in a slipshod performance.

Sensitivity to the opinion of others has been variously described as the reflected self, the looking-glass self, and as pride in self. In folk language it usually appears as a reference to "they." What will they think? What do they say? Have they found out? Social sensitivity is thus self-concern for one's social status and is not to be mistaken for conscience or personal integrity.

Social Control and Social Change.—In any intimate form of group life, tribal, village, family, or neighborhood, the power of social control over the individual members is very great. In intimate groupings acceptance by the group is essential to the welfare of the individual; and the possibility, however remote, of his being expelled from the group is a powerful force in making him conform to group ways. In such forms of group life it is almost inevitable that every individual will acquire during childhood and youth a high sensitivity to the opinion of the other members of the group. Failures in socialization will, therefore, be largely offset by effective social control. A man who is tempted to deviate from a traditional practice will be inhibited by fear of arousing the disapproval or mirth of his community; an unusually ambitious man will be restrained by fear of arousing antagonism toward himself; a lazy man will be urged to action by the knowledge that his indolence occasions a shaking of heads and a wagging of tongues.

But even as social change disturbs the socialization processes and makes for many errors in the training of the individual, it lessens the cohesion of the social group, reduces the individual's direct dependence upon membership in that group, and makes him less sensitive to community opinion. Social change tends to open communities, breaking their isolation and their intactness and setting the individual member somewhat free to go his own way without regard for the opinion of his fellows. In the extreme type of open community, the urban aggregation, the individual lives much among strangers and little among intimate friends and acquaintances. Although the good opinion of strangers may be desired, that opinion is to be obtained more by superficial than by fundamental conformity. Urban people are inclined to judge one another more by dress, mannerisms, and symbols of wealth than by such criteria as whether the individual is a good husband and father, an honest craftsman or merchant, and a firm believer in the god or gods. Thus only under conditions of social change has the individual any real freedom of action, and only if he also has some initiative will he then in any socially significant way utilize that freedom. For the rest he is, whether great or humble, rich or poor, wise or foolish, a product of his society rather than a factor in

determining its characteristics. The characteristics of a society cannot therefore be explained by the greatness or humility, the wealth or poverty, or the wisdom or foolishness of the individual members of that society. The search for the factors that have made a society what it is must extend beyond the individuals who constitute its current social membership, for they are but its representatives, not its causes.

Part II

The Social Determinants: Their Nature, Variability, and Interdependence

Chapter IV

THE CULTURAL BASIS OF SOCIAL LIFE

THE society into which the individual is born and of which he in time becomes a personal representative is the product of a multitude of variable and interdependent factors. Although each of the many distinctive societies now in existence is the product of a unique combination of them, the same factors enter in some degree into the making of every society and do so in the same ways. From the study of many societies it has been possible to ascertain the general nature of these factors and of the processes by which they operate. In this and the following chapters of Part II these factors and processes will be considered without reference to any specific society, just as the conditions making for socialization and the processes by which the individual is socialized were discussed without reference to any given individual.

The Cultural Heritage.—At the outset it is to be observed that the social present is determined mainly by factors that lie in the past. What any society is at any moment is only to the slightest extent determined by the people and circumstances of the moment. For an explanation of the characteristics of a society, one must look to the past. The sociologically relevant aspects of the past are not, however, as was indicated earlier, the events of conventional history. Neither kings and princes nor wars and revolutions have made a society what it is. The factors that have made a society what it is, that have determined its characteristics, are embodied in the culture; and it is to the cultural history of a society that one must turn for an understanding of how the social present has come into being.

The social heritages of all the persons of a given social group at a given time collectively constitute the cultural heritage of the group. Thus the culture antedates the group members; it is a product of the past. Whatever modifications of the culture are induced by the group members and by current circumstances will be embodied in the cultural heritage of the succeeding generation of group members. Since the beginnings of social life this process of inheritance, modification, and transmission has been going on. The peoples of the contemporary world are the current inheritors of the various cultures that have developed in and come out of the past, each of which has had its own life history.

THE NATURE OF CULTURE

In a sense, a culture is the embodiment in customs, traditions, institutions, etc., of the learning of a social group over the generations. It is the sum of what the group has learned about living together under the particular circumstances, physical and biological, in which it has found itself. As these circumstances have varied, so, too, of necessity have the experiences of the group. But what the group has learned, how it has adapted to these experiences, has depended on the group itself. Thus the culture, although conditioned by and in turn affecting natural circumstances, is the product of human experience; *i.e.*, it is man made.¹

Material vs. Nonmaterial Aspects.—The man-made character of the tools, weapons, habitations, clothing, ornaments, and other tangible objects that are a part of the cultural heritage of any people is generally apparent. The changes that men have wrought in nature and which together with these objects constitute the material aspect of a culture are, on the other hand, likely to be taken very much for granted, the fact that they are of human origin being generally forgotten with the passage of time. In many instances, however, and invariably in complex societies such as our own, the changes that men have made on the face of nature are the more enduring. Few of the cabins, plows, and wagons that were laboriously constructed by early American pioneers still exist, and those that do have nothing but historical value. But most of the lands that these pioneers cleared and broke to the plow, the routes that they beat through the wilderness, and the railroad lines, canals, dams, etc., that were subsequently constructed are still in use. The modern American is born not into a wilderness, as was the American of two centuries ago,

¹ For an extensive discussion of this point, see V. G. Childe, *Man Makes Himself* (Oxford University Press, New York, 1939). For the anthropological approach to culture, see E. D. Chapple and C. S. Coon, *Principles of Anthropology* (Holt, New York, 1942). Technical discussions of the nature of culture will be found in B. Malinowski, *A Scientific Theory of Culture and Other Essays* (University of North Carolina Press, Chapel Hill, 1944); and W. D. Wallis, *Culture and Progress* (Harper, New York, 1930).

but into a "conquered" land. That conquest, the modification of the physical and biological characteristics of the North American continent, represents the invested labor and ingenuity of generations of men. All peoples, except perhaps the first settlers in new lands, number among their cultural inheritances many assets of this sort.

In itself, the material aspect of a culture is of little social significance. What makes a tool socially significant is the use to which it is put; what makes a habitation significant is the fact that it is inhabited; what makes a road significant is the fact that it is traveled. The manual and mental skills and the values, sentiments, knowledges, and beliefs that make possible the construction and use of a material culture are intangibles that exist only in and through the members of a social group. These human attributes, the nonmaterial aspect of the culture, are also man made and, like the material aspect of the culture, are transmitted from generation to generation.

While the material and nonmaterial aspects of a culture tend over the long run to parallel each other—the man who inherits his father's house and lands, for example, usually inherits also his father's skills, sentiments, and beliefs—the nonmaterial aspect of a culture is prior in time to the material and is by far the more important. Men must learn to make tools and houses and clothes before they can have them; and their knowing how to make and use material objects is more important to the maintenance of their society than is their having on hand a stock of material objects. Were the peoples of the world to lose in one great catastrophe all their material culture—all their buildings, cities, roads, factories, cultivated fields, etc.—a rapid and painful decline in the population of the world would occur. The loss would not, however, necessarily mean the end of the various societies of the world. For the people who survived the catastrophe would still possess the ability to construct houses, cities, roads, and factories, to rehabilitate their fields, and to organize themselves into work and other groupings. The reconstruction of the capital plant of any society would be an arduous and slow process but not an impossible one. As long as the nonmaterial aspects of a culture survive, so can the society. The burning of ancient Rome did not destroy Roman society, nor has the recent physical devastation of Europe destroyed European civilization.¹

The nonmaterial aspect of a culture consists of two functionally distinct, although interdependent, parts: those skills, knowledges, senti-

¹ Destruction of parts of the physical plant of a rapidly changing society may, in fact, actually hasten the fullest use of existing skills and knowledges. The existence of an old house, public building, factory, or other capital good tends to deter the building of a new and more efficient one in accordance with new knowledges and skills.

ments, etc., that have to do with the control of nature and those that have to do with the working and living together in groups. The former are usually designated as the technology or the techniques of nature control and the latter as the techniques of social organization.

The Level of the Arts.—Upon the character of the technology depend the methods by which a people extract a livelihood from nature. And upon the degree of advancement of the technology, usually described as “the level of the arts,” depend the extent to which the group is directly dependent upon natural forces, the maximum possible size of the group, and many other conditions of group life.

Almost any human objective may be achieved with varying degrees of efficiency and ease. Men may go from place to place by walking, by riding on a horse, by riding in a wagon behind a horse, or by flying in an airplane. Fish may be caught from a canoe with a bone hook and leather thong or from a diesel-motored boat and with huge nets. The soil may be broken with a pointed stick, by wooden plow and lumbering oxen, or by tractor-drawn gang plow. The relative efficiency and ease with which a given people achieves its various objectives, the level of the arts, determines the productivity per unit of human endeavor and, hence, how long and how hard the various members of the society must labor to procure the necessities of life.

The level of the arts varies greatly from society to society and may change considerably over time within each society. Consider, for example, the time and effort once required to go from New York to San Francisco and the time and effort now required. By foot and even on the present roads and with present living facilities, it would take upward of 100 long, hard days of walking. A hundred years ago, before there were roads and living facilities, it actually took most of two years to cross the continent by ox or by horse and wagon, since stopovers had to be made for the winter months and supplies of food and water had to be carried for long spans in the journey. By sailing ship around the Horn, it then took many weeks. With the completion of a railroad across the continent, the trip became a matter of days; and now with the airplane it can be made in less than a day. The early pioneers planned and worked for months before starting the trek to the West; they walked and rode for many months; and many of those who set out never arrived. The contemporary New Yorker can decide at breakfast to go West, telephone the airline for reservations without rising from the table, ride to the airport, and with hardly a step or an effort on his part be in San Francisco for dinner that night.

Comparable changes in the level of the arts have occurred in the methods by which goods and food are produced. Two centuries ago the fabrication of so simple a thing as a bed sheet, for example, might require

as much as 100 woman-hours at spinning wheel and loom; and consequently bed sheets were luxuries enjoyed only by those of wealth. Today, the fabrication of a bed sheet requires so little human time and effort that it is often more economical of time and effort to throw away a torn one than to mend it. In medieval Europe before the development of the beast-drawn plow a serf could scratch up about an acre of land in the weeks between the end of winter and the planting season. Today a plowman can plow, disk, and harrow a dozen acres between sunup and sundown and hardly rise from his tractor seat. (Those who persist in the belief that arduous physical labor is somehow good for the soul of man may decry technological developments that permit men to accomplish more with less effort. But no one who has ever tried to go somewhere in a hurry by foot or to spade a large garden by hand will regret the cultural evolution of the automobile or the farm tractor.)

The Degree of Social Efficiency.—Upon the second part of the non-material culture, the techniques of social organization, depends the social efficiency with which a given level of the arts is utilized. Men seldom secure their livelihood as isolated individuals or live independent of their fellows; they live and work in groups. The ways in which men live and work together, their methods of organization, are always just as important to their welfare as are their techniques of nature control; and at times they are far more important. As was indicated in Chapter II, methods of social organization vary widely in character, complexity, and effectiveness from society to society; and, like the techniques of nature control, they change through time.

Working together may be no more than one hunter's scaring the game into ambush where another hunter lies in wait to make the kill. Or it may be the elaborate division of labor, involving millions of specialized workers, all dependent upon one another, that obtains in the modern world. Like the techniques of nature control, the methods of work organization consist of skills, knowledges, sentiments, beliefs, etc., that have been developed in the past and are embodied in the culture. They are usually related to if not a phase of one or many of the institutions of the society, usually the most prized and enduring items in the cultural heritage of any people.

Social institutions are modes of group, as distinct from individual, adaptation to some one or many aspects of the problem of human survival. It is largely through the mechanism of its institutions that a group protects itself from its enemies, human or otherwise, perpetuates itself and socializes its incoming members, and fulfills such intangible but important functions as the maintenance of group morale. The efficiency of the institutional arrangements of a people determines in large measure

their ability to live in a given kind of physical setting and to withstand such crises as famine, war, or revolutionary change.

The man-made character of the social organization is usually obscured by the man-made fictions that invariably surround it, most particularly its institutional elements. It is clear enough, even to the social philosophers, that a language is a man-made system of verbal symbols by which the members of a group communicate with one another. Words are inventions, even as fishhooks and table knives are inventions; and there is nothing divine, natural, or inevitable about the making of a word or the meaning ascribed to it. Institutions too are inventions, man made for the use of man. The pattern of human relationships, involving a great many specific sentiments, values, beliefs, etc., that is designated by the term "patriarchal family" is, for example, just as much a man-made device as is the term itself.

The Patterns of Culture.—Although culture develops trait by trait (or item by item), a culture is actually a patterning of interdependent trait complexes, rather than a mere aggregation of traits.¹ In a given society at a given time someone may invent a better fishhook or discover that the leaves of a certain shrub impart a pleasant flavor to the rabbit stew, or a priest may decide that two prayers for rain are more efficacious than one. But a fishhook, even a better one, cannot, obviously, be used apart from a fishline, from skills at fishing, from the desire to fish, and from the uses to which men put fish. The same principle holds true of any cultural trait, such, for example, as prayer for rain. The trait is not an isolated element but is one of a group of related traits usually designated as a "trait complex." Thus domesticated horses together with saddles and other equipments and the skills and knowledges necessary for caring for and using horses make up the horse complex; and automobiles together with surfaced roads, service stations, repair shops, highway police and the skills, knowledges, and values that enter into the use of automobiles make up the automobile complex. In the study of cultural development attention is sometimes centered on some specific trait; but it must be borne in mind that a trait does not evolve independently of the entire complex of which it is a part, nor does a trait complex operate apart from the rest of the culture.

The Evolution of Culture.—For a century and more archaeologists have diligently dug down through the refuse of the ages in search of clues to the social life of prehistoric peoples. They find, sometimes in

¹ Anthropologists are currently applying the term "configuration" to indicate the interdependence of cultural elements. See Chap. II, *The Concept of Culture*, in R. Linton's *The Cultural Background of Personality* (Appleton-Century, New York, 1945); and Chap. VII, *The Nature of Society*, in R. Benedict's *Patterns of Culture* (Houghton Mifflin, Boston, 1934).

great profusion, the tools, weapons, pottery, and other material artifacts of peoples who have long since died out. Such evidences do not reveal the origins of culture, but they do indicate its great antiquity; and they reveal something of the processes by which culture, specifically its material aspect, has evolved.

At least a half million years ago some subhuman creatures, presumably the forerunners of *Homo sapiens*, used stones as tools and inhabited caves. From that time to the present there is a broken and fragmentary but highly suggestive record of a slow and erratic improvement in material objects and techniques for using them.¹ By perhaps fifty thousand years before Christ, Neanderthal man of Europe was using stone implements almost as well shaped for their purposes as were the implements of the American Indians at the time of Columbus. Like the American Indian, Neanderthal man knew how to make a fire; and he apparently used it both to warm his caves and to cook his food.

True man (*Homo sapiens*), who appears in the records toward the end of the fourth glacial epoch, 25,000 to 40,000 years ago, fashioned his implements from bone as well as stone and often decorated them, even as he did his caves. With the dawn of the Neolithic period, 10,000 to 12,000 years ago, the record of the artifacts becomes clear and continuous. It indicates a constant advance in the material culture of the peoples who inhabited Europe and, less certainly, of those who inhabited other parts of the world. Presumably the nonmaterial aspects of the culture of these prehistoric peoples also increased in complexity, for with the beginnings of written history institutional and other aspects of social organization were elaborate and highly developed.

Some existing trait complexes, such as the iron complex, can be traced back through time and via various peoples for thousands of years. Invariably the artifacts decline in complexity and effectiveness as they are followed back through time. In many instances a new cultural trait is found to have been blended with a prior trait complex. Bronze, for example, was first used much as stone had been; the earliest bronze tools were cast in the pattern of stone tools. Very slowly men learned to redesign their tools to take fuller advantage of the special properties of bronze. Likewise, iron, when it came into usage in Europe, was first used as a direct substitute for the softer bronze; and tool designs appropriate to the special properties of iron awaited a slow evolution. In recent times, too, overlappings of old and new cultural traits have frequently occurred. The early automobile, for example, was simply a mechanized

¹ See W. W. Howells, *Mankind So Far* (Doubleday, New York, 1944); A. Keith, *The Antiquity of Man* (2 vols., Lippincott, Philadelphia, 1928); G. C. MacCurdy, ed., *Early Man* (Lippincott, Philadelphia, 1937); and R. W. Murry, *Man's Unknown Ancestors: The Story of Prehistoric Man* (Bruce Pub., Milwaukee, 1943).

buggy; and one of the initial attempts to mechanize the buggy was the construction of a mechanical horse, complete with tail. From such demonstrable parallels between cultural evolution in prehistoric and in historic times, it may be deduced that cultural development has everywhere and always involved much the same processes, however varied the consequences have been.¹

INVENTION

The basic process involved in cultural development is invention. All cultural traits—gods and devils, temples and brothels, morals and crimes, aesthetic values and social sentiments, manners and customs, words and thoughts—almost all the things that men do and use as members of a society have been invented at some time and in some place by some person. All are products of human ingenuity. No single invention, however, contributes very much to the development of a culture; it is never more than a minute addition to what already exists. Moreover, although an invention is achieved by one or a number of individuals, the invention itself is fostered and made possible by forces that grow out of the culture. The inventor as a person is not, therefore, in any sense the “cause” of the inventions that he makes; he is the agent, important as such, of cultural conditions that necessitate and through him bring about a modification of the culture.

Invention as Synthesis.—An invention, whether of a mechanical device, a mode of tilling the soil, an idea, a political constitution, a musical composition, or a better way of treating a wound, invariably consists of existing cultural traits; *i.e.*, what has previously been invented or discovered.² The invention is a new synthesis of a number of these cultural traits. The inventor of the first bronze tool, for example, took bronze, the method of casting this metal, and the pattern of a stone tool and put them together in a way in which they had never before been combined. The result was a new kind of tool, although all the elements of it were old. The composer of a popular song takes bits from a number of previous compositions, a current piece of slang or phraseology, and most anything else that happens to be available and combines them into what is deemed to be a new song. The inventor, the framer, of a new law or

¹ To this generalization one important qualification may be made. Over the past few hundred years a new factor, if not a new process, has entered into the evolution of culture—science, a method of discovery that is itself a cultural improvement on the antecedent, empirical method. The role of science will be discussed in detail later.

² See S. C. Gilfillan, *The Sociology of Invention* (Follett, Chicago, 1935). For a brief summary of the entire problem and an extensive bibliography on it, see C. Brinkmann's article, “Invention” (*Encycl. Soc. Sci.*, vol. 8, pp. 247-251).

constitution takes elements from a variety of old laws or political constitutions and runs them together into what he, and perhaps others, hope will do more than has any one of the laws or constitutions from which he has drawn.

Parallel Invention.—The importance of existent cultural traits and the comparative unimportance of the inventor as a person are most clearly demonstrated by the phenomenon of parallel invention. In many instances a particular invention has appeared more or less simultaneously through the agency of two or more inventors who worked independently of one another but who nonetheless drew upon, and in this sense represented, the same cultural background.¹ So often has parallel invention occurred that some consider invention to be a cultural process in which the role of the inventor may be ignored. If, according to this view, Darwin had not devised the theory of biological evolution and publicized it, then Wallace, who arrived simultaneously at the same theory, would have done so. And had neither Darwin nor Wallace invented the theory, someone else would have; for the elements of the theory were ready at hand and needed only to be combined to produce the doctrine of biological evolution. The inventor as a person is thus looked upon as a sort of human catalyst who simply speeds up a synthesis that is already in process of becoming. Although this view of the inventive process is something of an oversimplification, it does stress the cultural nature of invention and serves as a correction for the more common idea that the inventor alone is responsible for the creation of the whole that he has invented.

Trial and Error.—In the making of an invention, the inventor does, however, contribute purpose and endeavor; for the new synthesis of preexisting cultural elements is achieved by trial and error. Intent upon the creation of a new mechanical device, a new idea, a new symphony, or whatever, the inventor proceeds to try this and then that combination of cultural items. This trial-and-error procedure presumes individual initiative, for the process is tedious and demanding and seldom rewarding. (The frequency of errors and the rarity of a success in the trial-and-error process is what led Edison to remark that invention was "99 per cent perspiration and 1 per cent inspiration.") Thus unless a society

¹ Cultural anthropologists use the term "parallel invention" to refer to the fact that common conditions in unrelated cultures may produce similar inventions. For decades a controversy has raged between those anthropologists who believe that all great inventions of the past occurred in one cultural center, usually thought to have been Egypt, and those who consider that similarity of cultural elements does not necessarily mean common origin. The latter have stressed the possibilities of parallel invention in unrelated cultures as well as parallel invention by two or more individuals in the same culture. For a brief review of this controversy, see A. L. Kroeber's article, "Diffusionism" (*Encycl. Soc. Sci.*, vol. 5, pp. 139-142).

produces some individuals with initiative, there will be no inventions, whatever the cultural imperatives.

The trial-and-error procedure that culminates in an invention may be undertaken by a single person or by a series of persons, each of whom keeps trying and failing until at length one succeeds. Selden, for example, is given credit in American patent law for the invention of the gasoline-driven automobile. A great many men had preceded him, however, in the attempt to mechanize the carriage. Although none of these previous attempts had proved to be sound, by Selden's time a great many errors had been eliminated and an almost, but not quite, workable combination of the buggy and the internal-combustion engine had been achieved. Selden profited by the errors and the partial successes of his predecessors and had the good fortune to be successful in his own trial-and-error endeavors. A similar story of a succession of men trying and failing, and constantly narrowing the range of failure until at last one man succeeded, lies behind most important inventions.¹ Rarely has one man conceived of an inventive problem of any great magnitude and then lived long enough or labored diligently enough to solve it.

The process of invention does not stop and the efforts of men cease when one of them arrives at a solution to a problem on which they have been working. Seldom is an invention the completion of a task, and never is a modern invention in the field of technology the ultimate goal; the invention is, rather, a turning point in a continuous process. The first bronze tool was perhaps more effective than the stone tool on which it had been patterned. But in the ages that followed, the bronze tool was gradually refined by a succession of secondary inventions. Edison may have invented the first usable electric light bulb, Selden the first successful automobile, and the Wright brothers the first flyable airplane. But work on light bulbs, automobiles, and airplanes did not cease. For many years many men continued to refine these crude inventions. In the modern world the refining of a basic invention often changes the original device beyond recognition. Thus, although the same principle underlies the original iron filament vacuum bulb of Edison and the present fluorescent lamp, the principle is about all that remains of Edison's invention. Likewise, in the century and more since its invention, the Constitution of the United States has been so much modified by Constitutional amendment, by Supreme Court interpretation, and by administrative practices, that some persons doubt whether even the basic purpose still remains.

¹ For a discussion of the many contributors to the development of the steamboat, which in America is generally accredited to Fulton, see J. T. Flexner, *Steamboats Come True* (Viking, New York, 1945).

Purposive vs. Inadvertent Invention.—Many recent inventions in technology, and presumably many earlier ones, were fortuitous in the sense that the inventor was trying to achieve one thing and actually achieved another. Such inadvertent invention (and discovery as well) is apparently increasing in importance as creative endeavor becomes more and more a highly specialized activity and the inventive process is brought more and more under control. An ingenious craftsman tinkering at his bench might inadvertently hit upon a better way to shape a piece of metal; but if he was at the time intent upon finding a better way to fasten two pieces of metal together, he would probably fail to recognize that he had in fact invented a new metal-shaping method. When, as is so often the case in the contemporary world, would-be inventors are highly trained technicians working in the same laboratory, the chances are far greater that an inadvertent invention by one of them will be recognized for what it is. This increased probability is one of the advantages of science-based creative endeavor. No one knows, of course, how many things have been invented and then lost simply because the inventor was trying to accomplish something else. But the records of early science are filled with casual mention of inventions and discoveries that seemed then of no importance and yet which subsequently were "rediscovered" and put to good use.¹

Necessity as the Mother of Invention.—It is not true, as an old folk saying implies, that, when there is a need for something or other, that something will be invented. Needing food, hungry people do not necessarily discover new food substances or invent better methods of producing old ones; indeed, the hungriest peoples in the contemporary world actually display the least initiative and ingenuity in producing food. It is true, however, that men must have a problem to solve, *i.e.*, they must perceive the existence of a problem before they will attempt to solve it, and that the inventor derives his problems from his social milieu.

In some instances, changes in the physical or biological habitat pose new problems of cultural adaptation and thereby stimulate inventive endeavor. The various plagues that swept over western Europe between the thirteenth and the eighteenth centuries, for example, provoked a

¹ A recent incident of this sort was the inadvertent discovery by the bacteriologist A. Fleming of an antibacterial substance produced by certain molds, which he named penicillin. He reported his discovery in a technical journal in 1929 but did not pursue the matter further. For one thing, the subsequent perfection of the sulfa drugs and the discovery of their antibacterial powers distracted his attention and that of others from penicillin. Ten years after the initial discovery, H. W. Florey picked up where Fleming had left off, and out of his researches came the rediscovery of the medical value of penicillin. A host of other biologists, chemists, and technicians then contributed their bits to the invention of a method for the large-scale production of penicillin. See B. Sokoloff, *The Story of Penicillin* (Ziff-Davis, New York, 1945).

variety of attempts to check the spread of these diseases. None, however, were successful. Not until a vast amount of biological knowledge had been accumulated did the stimulus of epidemics lead to the discovery of the means by which diseases are transmitted and the invention of ways for bringing them under control. Today, any socially significant variation in one or the other of our habitats sets scientists and technicians to searching for ways to reestablish the desired normal; a new disease immediately becomes the concern of medical scientists, and a decline in some important natural resource promptly encourages the search for substitutes.

Changes in nature do not necessarily stimulate men to inventive endeavor. Many peoples have submitted passively to such natural catastrophes as flood, earthquake, and drought; and many have made no effort to prevent recurrent famine and disease. For what constitutes a problem is a matter of social definition. Throughout most of human history those circumstances that are now considered to be problems demanding solution—disease, famine, war, political discrimination, soil erosion, etc.—were generally accepted as inevitables that had to be borne, “acts of God” that could not be avoided.

Only where and when men have somehow become discontented with some of the many things as they are and, provoked by their discontent, have invented the idea that things need not be that way, does the “necessity” arise that may mother an invention. It is for this reason that the prevalence of the idea that man can be the master of his destiny is the most significant characteristic of the present age. More than any other single factor, this idea is responsible for the intense and continuing endeavor of scientists, technicians, and laymen to find better ways to do things and new things to do.

Cultural Change and Invention.—Changes in the external world occasion fewer inventions than do changes that arise within the culture itself. However such a change comes about, it acts as a stimulus to inventive modification of other items in the complex and, perhaps, to the development of an entirely new complex. In simple terms, one invention provides the necessity for another, and so on.

A recent and rather spectacular instance of inventive endeavor that was induced by changes in the culture will serve to illustrate the general process: The rapid growth of cities that began in western Europe during the Middle Ages and that became especially pronounced during the last century posed a host of new problems. One very specific problem was that of providing cheap, safe, and effective lighting for people who were gradually turning night into day.¹ That many men were encouraged by

¹ See F. W. Robins, *The Story of the Lamp* (Oxford University Press, New York, 1944).

this culturally induced necessity to devote themselves to the problem of lighting is evidenced by the great variety of lighting devices that appeared during the course of the last three centuries and by the steady improvement of lighting facilities. In the medieval towns the burgher had to light his way from house to house at night by a burning fagot; in his home he relied upon crude animal-fat lamps and candles. That he generally stayed at home at night and went to bed early is quite understandable. Better lamps slowly made their appearance; but for a long time they continued to be fueled with costly, inefficient, smelly animal fats. By the beginning of the last century whale oil, more satisfactory than lard or tallow, had come into general use. Meanwhile, someone had invented the twisted candlewick that curved over in the heat of its own flame and burned itself off, and candlewicks no longer needed to be trimmed every half hour. Later mechanical production replaced hand-dipping, and the cost of candles was greatly reduced. Eventually the illuminating value of coal gas, a by-product of the coke needed in the smelting of iron, was discovered; and in time means were invented for piping gas about the city. First used for street illumination, gas was in time brought into urban habitations, where it displaced the candle and lamp, which were by then fueled with kerosene rather than whale oil. The open flame of a gas lamp gave off far more heat than light, no great disadvantage in street lighting but a considerable hazard and, particularly in hot weather, a distinct inconvenience in the home. Toward the close of the last century these problems were partly solved by Welsbach, who invented a mantle that converted a higher proportion of the burning gas to light. Meanwhile, however, many discoveries and inventions were being made in the field of electricity. To reduce maintenance costs of street lighting (gas lamps had to be ignited each evening and turned off later) and incidentally to provide more light, the electric arc lamp was devised and installed in the larger cities. The arc lamp, consisting of two carbon rods between the points of which electricity arced, could not, however, be used in the close confines of home, shop, or factory; and it was to make electrical illumination available for home, shop, and factory uses that Edison applied himself, ultimately inventing the incandescent electric lamp.

Inventions in the realm of social organization are likewise stimulated by changes within the culture. At the same time that many men were devoting themselves to the improvement of illumination techniques, many others were endeavoring to devise organizational substitutes for the family and other old institutional arrangements that did not operate well under the conditions of urban life. The record of their endeavors is not so clear as is that of inventors in the realm of technology. But such end products of their inventive labors as the public school, the nursery school,

urban police and fire forces, courts of domestic relations, etc., are just as significant to contemporary society; and they apparently evolved in much the same way and out of the same sort of necessity as did electric lighting and other technological inventions.

DISCOVERY

The second process involved in the development of culture is discovery, the uncovering of preexisting but socially unperceived facts of nature or of society. The distinction between discovery and invention is not always clear; an inventor may incidentally make a discovery and a discoverer may incidentally invent something. In times past the distinction between invention and discovery was probably of no social importance, even when it was recognized. In contemporary societies, however, the distinction is a vital, if at times vague, one. For the tendency is to reward highly and thus encourage the technician who invents and more or less to ignore the scientist upon whose discoveries the technician is ultimately dependent.

Although it may not have any immediate social significance, a discovery is an addition to the knowledge of a people rather than to their stock of technological and social devices; and if it becomes embodied in the cultural heritage, it may in time serve as an element in some subsequent invention or discovery. The discovery by Pasteur that micro-organisms were responsible for the souring of wine was, for example, a necessary prerequisite to the invention of an effective means of preventing the souring of wines. And as an addition to biological knowledge, it subsequently served as the basis for countless other discoveries and inventions.

Empirical Knowledge.—In premodern societies all discoveries were presumably arrived at empirically. A discoverer stumbled upon some new fact and passed on to others what he had observed. In the pursuit of game, for example, a primitive hunter might inadvertently find a new and easier way to cross a stream, a thicket, or a rise of land. He might then report this discovery to the members of his tribe; and thereafter the knowledge of the easiest way to cross the stream, thicket, or rise of land would be a part of the tribal culture. Differing only in complexity was the process by which Columbus discovered the Americas. Intent upon finding a sea route to the Orient, Columbus sailed westward where no other European had previously ventured. The culture upon which Columbus drew was vastly more complex than that of any primitive hunter; he had seaworthy ships, preserved foods, the compass, and arts of navigation that had been culturally inherited from the Phoenicians. Nevertheless, the process by which he discovered the Americas was the

same as that by which a primitive hunter might find a new way across a stream. In looking for spices and gold, Columbus inadvertently happened upon land previously unknown to Europeans. Because he returned to tell of his experiences, he was able to contribute new knowledge (and many fictions, for that matter) to the culture of Europeans. On the basis of that new knowledge a variety of new economic and social practices, such as the militant search for gold by the conquistadors, was gradually developed; and in the course of time more discoveries were made, and more new activities were devised. Thus the discovery of the Americas by Columbus initiated the entire process of exploitation and colonization of the New World.

Empirical knowledge is distinct from the myths and legends of folklore in that the latter are simply verbal inventions that have become incorporated into the culture. By such inventions, people explain the undiscovered—the world beyond their range of experience, the origins of the world in all its various aspects, and the causes of phenomena that are known but not understood. Although myths and legends serve as the basis for the development of social practices or as a justification for existing practices, they are the antithesis of knowledge. Moreover, they tend to obstruct discoveries that would otherwise become embodied in the culture as knowledge. The myth that the world was flat, for example, hampered Columbus (who did not believe this particular myth) in getting support for his voyage; that myth had been invented and was believed by people who had never ventured out to the edge of the world. Empirical knowledge, on the other hand, is a deduction from experience. The experience may be so limited and the observation so inexact that the deduction is false; but the deduction is made from some sort of factual evidence rather than from figments of the imagination. Columbus deduced that the land he found when he sailed westward was the famed Indies. Although the land was not the Indies, it was not a figment of his imagination; and while the many who set sail for the Indies on the basis of Columbus's discovery did not reach the Indies, they did at least reach land.

Prior to the beginnings of modern science, all knowledge was derived from empirical discovery and was as a consequence a mixture of valid and invalid deductions. The line between myth and knowledge was never clear, and social practices were often based upon an admixture of both. Thus fishermen might pray that fish would be where experience had taught them that fish usually were; a physician might recite magical words as he administered his potent herbs; and a primitive engineer might ornament his building with a cabalistic sign to prevent its falling down, after he had actually constructed the building in accordance with empirical knowledge of materials, design, and stresses.

Scientific Discovery.—Science is a refinement of the empirical method of discovery and involves a rejection of the common-sense idea that things always are what they appear to be. In the empirical process a deduction may rest upon one fleeting or fragmentary observation. Columbus jumped immediately to the conclusion that the land he had discovered was the Indies, although everything about it, the character of the inhabitants, for example, indicated otherwise. In scientific discovery, on the other hand, a single or fragmentary observation is not considered sufficient basis for a deduction; the deduction must be based upon repeated and complete observations. Moreover, in the scientific procedure nothing is taken for granted, and both in observation and deduction the biases and prejudices of folklore are ignored. As a consequence, scientific discovery is usually a substitute for myth and legend rather than, as is empirical discovery, a supplement to them; and science has therefore been opposed by all those who have had a vested interest in maintaining folklore—the medicine men, the priests, the politicians, etc. Furthermore, scientific discovery, as was indicated earlier, proceeds on the basis of multiple and interdependent variables rather than on the basis of one-way cause and effect, the concept that underlies all empirical knowledge.

So far as is known, all discoveries prior to about the fifteenth century were empirical in nature. The empirical method made for exceedingly slow extensions of the culture; it gradually contributed more of the same order of mixed fact and fiction to the cultural heritage. The scientific method, on the other hand, has tremendously increased the rate at which knowledge has grown and has disentangled that knowledge from the cultural stock of myths and legends. The invention of the scientific method has thus introduced a new quality into cultural development, and the refinement of the scientific method over many centuries has led to the incorporation of an unprecedentedly large and ever-growing body of verified knowledge into the culture of modern peoples.

CULTURAL DIFFUSION

Many cultural traits and trait complexes have been invented or discovered in one society and have then spread directly or indirectly to other societies. The process by which they spread is known as "diffusion." In the development of most cultures the process of diffusion has been fully as important as have invention and discovery, and for some cultures more important.

Although the specific origin of a cultural trait can rarely be ascertained, the diffusion of a trait can often be traced over considerable periods of time and from society to society. Whereas the origin of the horse complex, for example, is lost in the mists of antiquity, the com-

paratively recent diffusion of that complex among the aborigines of America is fairly well known. The Spanish brought the horse and its usages to Mexico; gradually certain North American tribes, notably those of the plains, acquired horses and the knowledge of how to care for and utilize them. The specific origin of the tobacco complex also is unknown, aside from the fact that the locale was America. The diffusion of that complex to Europe and, thence, to all the world is, however, a matter of record. Historically, therefore, more is generally known about the process of diffusion than about invention and discovery.

The Cultural Center.—At various times in human history certain societies seem to have served as centers from which cultural traits were diffused to other less enterprising societies. These centers of diffusion have been cultures that were for various reasons developing rapidly by invention and discovery. For many centuries the valley of the Nile was a cultural center of this sort. Many devices, particularly in the realms of technology, political organization, and art, reached their highest development among the Egyptians and spread, often in cruder form, far into the cultural hinterland, northwest into Europe and east as far as India. Subsequently, Rome was the great cultural center for all the Mediterranean and European peoples; and Roman law, Roman roads, and Roman city walls are still to be found in the cultural heritages of most of the peoples of Europe. In Asia the Chinese Middle Kingdom was from early times the dominant cultural center, its cultural developments spreading throughout the Asiatic mainland and providing even the insular Japanese with many of their cultural traits. The written language of Japan, for example, was borrowed from the Chinese via Korea. About the fourteenth century western Europe became the dominant cultural center for the entire world, a position that it retained until well into the present century, when the United States began to export culture as well as grain and cotton.¹

The Cultural Trading Post.—In some instances, the center of cultural diffusion has been less a place of cultural development than a place of cultural exchange. The early Greeks, for example, were not so much originators of culture as they were traders in culture. To the Greek cities came many peoples from many lands; and incidental to the trade in goods there was, apparently, a considerable exchange of cultural traits. In developing their city-state mode of organization, the Greeks drew upon many other cultural systems, and through Greece, cultural elements were transmitted from east to west and west to east. More than a thou-

¹ For a rather extreme but suggestive interpretation of the decline of Europe as a cultural center, see E. Fischer, *The Passing of the European Age: A Study of the Transfer of Western Civilization and Its Renewal in Other Continents* (Harvard University Press, Cambridge, 1943).

sand years later England became the trading post for many cultures. To England came the Venetians, the Portuguese, and the Spaniards to exchange goods and cultural items with the Germanic, Baltic, and Scandinavian traders; and from all of them the English people obtained a great many widely varied cultural items.

The cultural trading post does more than effect an exchange, and thus a diffusion, of cultural traits. It fosters a cross-fertilization of cultures in which there may occur a welding or fusion of traits or trait complexes from fundamentally different cultures to produce new traits or new complexes having the uniqueness of inventions. Usually, therefore, a cultural trading post becomes in time a center of cultural development. The fact that England was for some centuries a great cultural trading post was, for example, in no small measure responsible for its subsequent emergence as the cultural center for the early industrial revolution.

The Cultural Island.—Many factors influence the extent to which cultural items are borrowed from cultural centers. Physical isolation, which is a consequence of physical circumstances and the level of the arts of transportation, will preclude a people from borrowing from abroad. Quite as important in precluding borrowing is social isolation—the refusal of a people to traffic culturally with any other people. Such a people becomes an island of indigenous culture, untouched by the cultural developments of other and even adjacent peoples.¹

The most striking example in recent history of socially imposed isolation is that which arose in Japan toward the close of the sixteenth century. Some preliminary and unsatisfactory contacts with Western traders led the feudal rulers of Japan to prohibit further intercourse with Westerners; and for some two centuries thereafter Japan remained a cultural island, its culture free from contamination. Following the forcible opening of Japan to foreign commerce in 1853, the Japanese reversed their policy and became avid borrowers of Western technology.

In most instances, social isolation is maintained on more subtle and less political levels than was that of Japan. Moreover, a cultural island may exist within a larger cultural system rather than independent of it. With some groups, such as the Amish of Pennsylvania, social isolation is justified on religious grounds; with other groups social isolation is vaguely associated with the idea of biological superiority, as it is by the Brahmins of Boston who persist in living, in so far as circumstances permit, in the ways of clipper-ship days. Whatever its form and however it may be

¹For a discussion of two peoples who have long maintained a high degree of social isolation, see W. M. Kollmorgen, "The Agricultural Stability of the Old Order Amish and the Old Order Mennonites of Lancaster County, Pennsylvania" (*Amer. J. Sociol.*, vol. 49, pp. 233-241, 1943). The effects of physical isolation are clearly indicated by H. Kephart in *Our Southern Highlanders* (Macmillan, New York, 1926).

justified, resistance to cultural borrowing is at basis an extreme expression of ethnocentrism.

Ethnocentrism.—The more successful a social group is in socializing its incoming members into the culture of the group, the more the members of the group are culturally self-centered and self-satisfied and indifferent if not antagonistic to the cultural devices of others. They consider their own particular cultural traits the ideal, indeed, the only permissible modes of conduct; theirs are the right, the proper, and the sensible ways to cultivate the soil, to heal sickness, to bury the dead, to behave toward a wife, to raise a child, etc. Such ethnocentrism is invariably supported and maintained by verbal inventions—myths and legends—concerning the causes of social life, the origins of the culturally designated institutional arrangements, and the reasons for technological practices.

All peoples, even modern peoples, are to a considerable degree ethnocentric. As was indicated earlier, ethnocentrism is one of the cohesive forces that maintain the group as a survival unit and foster the subordination of the individual member to the collective welfare. But while it aids in keeping the social group intact, ethnocentrism precludes adoption, via borrowing, of cultural elements that might contribute to the welfare of the group and, perhaps, to its ultimate survival. Under conditions of change, either external to the social system or within it, a culture that remains static is a liability rather than an asset. Even as the businessman who refuses to change with the times ends up in bankruptcy, so a society that clings stubbornly to its old cultural practices may eventually find itself fighting a mechanized war with horse and saber or an air war with battleships.

Selective Borrowing.—Even when ethnocentrism does not hamper the diffusion of culture, borrowing is not a haphazard process. What is borrowed by any society has been selected from what is available in terms of its appropriateness to the culture of that society.¹ Early modern Europeans borrowed many things from Chinese culture—gunpowder, tea, and the magnetic compass—while the Chinese in turn borrowed many things from Europe—the soft pillow, tobacco, the method of distillation, and some elements of Christianity. In each case the borrowing was highly selective; in a very complex way the Europeans picked over the Chinese culture, and vice versa, even as a shopper picks over the goods in a de-

¹ A study of the diffusion process within a modern society is reported by B. Ryan and N. C. Gross in "The Diffusion of Hybrid Seed Corn in Two Iowa Communities" (*Rural Sociol.*, vol. 8, pp. 15-24, 1943). See also E. C. McVoy, "Patterns of Diffusion in the United States" (*Amer. Sociol. Rev.*, vol. 5, pp. 219-227, 1940); and M. Mead, *The Mountain Arapesh: An Importing Culture* (American Museum of Natural History, New York, 1938).

partment store, taking what she thinks will be useful or ornamental in view of what she already has and what she values most.

Utility in terms of the existing culture is the primary criterion in borrowing. A coastal fishing people, for example, would be unlikely to borrow the horse complex; and a plains people would be unlikely to borrow from a fishing people the boat and the techniques of navigation. Moreover, the trait complex is ordinarily borrowed in its entirety, for an isolated trait is unlikely to have much utility. A people to whom the horse complex might conceivably prove valuable obviously would not adopt the horse without also borrowing from the same source the techniques of maintaining, training, and riding horses.

In some instances, however, an isolated cultural trait is borrowed without regard for its original value and is given a new use and value in the culture of the borrowing society. Nearly a century ago, for example, the primitives of the South Seas were offered in trade sewing machines of an obsolete model. Since these primitives had no textiles and wore few clothes anyway, they had no use for the sewing machines as sewing machines. First presented by canny traders to local chieftains as religious objects, the machines were later taken in trade by lesser natives who desired to emulate their chiefs. The early Protestant missionaries to China were able to secure many "converts" to the Christian faith; but conversion to the Chinese meant a guarantee not of future salvation but of rice from the mission storeroom (hence the term "rice Christian").

The diffusion of cultural elements is not, it should now be evident, a simple or automatic process. Two peoples with widely diverse cultures may live in close proximity for centuries without borrowing from one another. Whether, opportunity permitting, borrowing will occur depends upon the extent to which the potential borrowers are ethnocentric and the relevance of what might be borrowed to their culture. When borrowing does occur, what is borrowed may be put to its original purpose or to some entirely different use.

Borrowed Culture.—Although some simple cultures have apparently been in large part indigenous, products of local invention and discoveries, most if not all complex cultures have developed in considerable measure through the borrowing of cultural elements from abroad. The Romans derived the basic elements upon which they developed their great civilization from the Greek city-states; and later they borrowed many things from Carthage, Alexandria, and, in due course, from Judea. Much of the development of Western civilization also was accomplished by borrowing. The Romans had planted the cultural seed that, after lying dormant for centuries in the provinces of western Europe, germinated early in the Middle Ages. Having rediscovered their Roman cultural heritage, western Europeans soon added to it such valuable items as the Arabic system

of numerals and certain mathematical techniques that had been developed by and were borrowed from the Byzantine Empire. As their techniques improved and they were enabled to wander far afield, Europeans began to draw upon the Chinese,¹ the Indians, and, finally, the primitives of the Americas.

Few of the fundamental items in contemporary Western cultures are of Western origin. The wheel, iron, the arch, mathematics, alphabetical writing, Christianity, the patriarchal family, and representative government were all developed elsewhere and imported and incorporated into European cultures. Only within the past five hundred years have the peoples of Europe begun to repay their cultural debt to the other peoples of the world, and they have not always made their payments in kind.

CULTURAL CUMULATION AND THE ACCELERATION OF CULTURAL GROWTH

Because invention involves a synthesis of old cultural elements, because discoveries are dependent upon the extent of existent knowledge, and because borrowing occurs only where the new fits in with the old, the more highly developed, variegated, and ramified a cultural system is, the greater is the likelihood that inventions, discoveries, and borrowings will occur. Of cultural items, as of dollars, it may be said that the first million are the hardest to acquire and that the more a people have, the more they can and probably will acquire.

Cultural Cumulation.—Although many inventions, discoveries, and borrowings displace prior cultural elements, they are nonetheless in the nature of additions to the cultural stock. The automobile and truck, for example, displaced the horse for most purposes; but the automobile and truck were additions to the stock of mechanized transportation devices—to the railroad, the streetcar, and the steamship. Likewise the discovery that organic life does not generate spontaneously displaced old ideas regarding yeasts, molds, and the cause of fermentation; but it also opened an entirely new field of biological exploration and as a consequence added to the total sum of human knowledge. The fact that new cultural elements are additions to the total of a culture, either directly or indirectly, means that cultures tend to grow in extent over time; *i.e.*, cultural development is a cumulative process.

Acceleration of the Rate of Growth.—Cultural growth is, however, more than additive. As culture accumulates, the rate of growth tends to rise. That rise, or acceleration, in the rate of cultural development is roughly analogous to the acceleration of the rotation of a heavy flywheel

¹ For details, see A. E. Christy, *The Asian Legacy and American Life* (Day, New York, 1945); and P. F. Cressey, "Chinese Traits in European Civilization: A Study in Diffusion" (*Amer. Sociol. Rev.*, vol. 10, pp. 595-604, 1945).

under constant power impulses. The flywheel starts slowly, but with each succeeding revolution gains slightly in speed. In a like way, but for entirely different reasons, of course, a culture may develop at an ever-increasing rate.

The factors that make possible an acceleration in the rate of cultural growth stem from the nature of culture itself. In the first place, the addition of a new cultural element may have far greater consequences to the culture than a mere adding of another element to the sum of elements on hand. The addition of one new word to a thousand-word vocabulary may, since that new word can be used in combination with a wide variety of old words, increase communication ability by far more than one one-thousandth. The discovery of the existence of microorganisms was only a small addition to man's knowledge of organic life. Yet because this new knowledge could be combined with a great variety of old knowledges and techniques, the discovery of microorganisms brought about a multitude of vital changes in man's relations to the organic life of the world. The invention of radar was but a single addition to the existing electrical equipment; nevertheless this one addition to the uses man makes of electricity wrought a profound change in military tactics, possibly turned the course of the Second World War, and made the commercial airplane safe as well as swift.¹ The extent to which more-than-proportionate consequences follow the addition of a new cultural element depends upon how many old elements can be put into combination with the new one, and this in turn depends upon how extensive and variegated the culture is. Hence the disproportionate consequences of new items generally increase as the culture develops. Moreover, each addition to the culture tends to disturb in large or small measure the whole culture and, as has been indicated, to foster invention, discovery, and borrowing. Thus the new cultural element tends to accelerate acquisition of other new elements.

The acceleration of cultural cumulation is demonstrated by the cultural history of mankind as a whole. Existing evidences indicate that cultural developments during the prehistoric period proceeded at a very slow rate and that since the beginning of the historic period the rate of development has constantly, although not regularly, increased. Men took many thousands of years to progress from the use of selected but unshaped stones as tools to the highly developed flint and obsidian point.

¹ Radar is considered by many military authorities to have been developed just in time to turn the balance in favor of Britain during the German aerial attack upon London. It gave the British sufficient forewarning of an attack to permit their warming up the few fighter planes that they had and getting them up above London before the bombers arrived. Radar-exploded shells were subsequently developed by the United States Navy and apparently were an important factor in saving naval forces during the Kamikaze attacks off Okinawa.

The development of the whole of the age of iron, on the other hand—from crude spearhead to airplane—has taken but three thousand years. Moreover, the technological additions to the iron age that have been made during the past fifty years have been of far greater magnitude than those that occurred during the entire nineteenth century, and those that occurred during the nineteenth century were far more extensive than those that had occurred in the two preceding centuries. Whereas the sailing ship, which began to undergo development by Europeans about 1300, took nearly six centuries to evolve into the great frigate and the fleet clipper, the steamship was invented and brought to its present state of development, from uncertain paddle-wheel steamer to reliable, efficient, and fast electro-turbine ship of today, in less than one hundred years. And the still more recent automobile and airplane have developed from clumsy toys to efficient, safe, and vital transportation devices in but one-third of a century. In each instance, the greatest and most rapid development occurred during the latter part of the developmental period. During the twenty years between 1915 and 1935 top speed for warplanes rose from 75 to 350 miles per hour, or an annual average increase in speed of slightly over 10 miles per hour, whereas for the ten years after 1935 the top speed of warplanes showed an average annual increase of better than 20 miles per hour.

Acceleration of the rate of cultural cumulation is apparent also in the physical and biological sciences. The medical practices of one hundred years ago, for example, were only slightly improved over those of the Middle Ages; they were at best based upon empirical knowledge and at worst and quite generally upon folklore. During the last century, and mainly during the last fifty years, medical practices have come to be based upon scientific knowledge of the human body and its disorders; and such knowledge has been growing with ever-increasing rapidity. In physics, also, a spectacular rise in the rate of accumulation appears. During the past fifty years more discoveries have been made than had previously been made in all the centuries since Galileo. Recently, developments in both technology and the sciences have been given a new impetus by the invention of a method of releasing atomic energy. To an even greater extent than any of the major inventions and discoveries that preceded it, this new cultural item will have disproportionate consequences for all the cultural systems of the world.

Chapter V

CULTURE AND THE PHYSICAL HABITAT

EVERY culture develops in some sort of physical setting—on a South Sea island, in the African jungle, high on the slopes of a mountain, along the banks of a great river; and that setting, whatever it may be, constitutes the physical habitat of the people who develop and utilize the culture. Unlike the various species of plants and animals, men are not organically adapted to survive in any particular kind of physical habitat. The most that can be said for them is that they are by nature land animals; they have neither wings for flying nor gills for obtaining oxygen from water. But although they are not equipped to live under any particular set of natural conditions, wherever they do live, they must adjust to the conditions that obtain there—they must build habitations, fabricate clothing, and use techniques of food producing that are appropriate to the given region. A culture must, therefore, develop in terms of the particular natural conditions of the particular physical habitat or it will fail its purpose, the people will die out, and the culture will disappear.

The relationship between the characteristics of a given culture and those of the physical habitat in which it is found has been the subject of a great deal of folklore, a number of philosophical doctrines, and some scientific study. People tend to think of their physical habitat in categorical terms. The climate is good or bad, hot or cold, wet or dry; the soil is rich or unfertile; the region is coastal, upland, or valley. And in both the folklore and philosophy it is assumed, usually in contradiction to other assumptions concerning social causation, that the explanation for certain characteristics of a culture lies in some aspect, such as the climate, of the physical habitat. Ignored is the fact that the physical habitat is a composite of a large number of interrelated geographic elements, no one of which is important in itself.

The climate of any region, which assumes the most prominence in the folklore, is the product of a number of elements—air temperature, humidity, sunlight, frequency and intensity of air movements, and rainfall—each of which is subject to wide momentary, daily, and annual variation. Technically the climate of a given region is the average of these combined elements over a period of years; and so calculated, the climate of Boston is comparable to that of Seattle. But men do not adjust to the

average of these elements over the years; they adjust to the weather, the product of these elements at each successive moment of time. The range and distribution of climatic elements is thus far more important than their average. The topography of an area also is a complex of natural factors—the position of streams, rivers, lakes, coastal lines, hills, and mountains, active volcanoes or earthquake faults, if any, etc.; and on this complex depends the altitude of the habitat, its ruggedness, its accessibility, its proximity to other habitable regions, and many other conditions that are important to man. Associated with the topography is the distribution of the natural resources of the region—the soil fertility, minerals, coal, oil, water supplies, etc. Each of the geographic elements varies by imperceptible degrees from region to region and in combination with all the other elements determines the physical characteristics of any particular region. Thus no one factor, climate, topography, or resources, is significant apart from the others. No matter how comparable the climates, an island in mid-Pacific, an upland valley between Rocky Mountain peaks, and a meadow in the British Isles are, for example, quite different sorts of places in which to live.

The relationship between the physical habitat and the culture of an area is one of limited interaction. The physical habitat provides men with the organic materials of life and imposes the natural conditions for survival, and the culture cannot exceed these materials. But the physical habitat in no way “causes” the culture. It sets the stage for social life, a wide and elaborate stage or a small and barren one as the case may be; and the characteristics of that stage limit the range of action that can transpire on it. But those characteristics do not cause any action to occur or determine the course of what action does occur.

CULTURE AND REGIONAL DIFFERENCES IN THE PHYSICAL HABITAT

The physical characteristics of the various areas of the world vary widely, and so too do the cultures of the people who inhabit the earth. There is, however, no consistent relation between the two. In many instances, similar cultural practices are found among peoples who live under very different physical circumstances. Monogamous marriage is practiced here and there all over the world; Christian beliefs, ethics, and rituals have been adopted by peoples living under extremely varied geographic conditions; and the democratic form of government seems to work quite as well in Iceland and Hawaii as in England and Switzerland. Conversely, in many instances widely differing cultural practices appear among peoples who inhabit the same geographic area or geographically comparable areas. The Navaho Indians were seminomadic herdsmen,

while the Hopis, who inhabited the same region of the Southwest, were settled agricultural peoples.¹ The Manus and Samoan peoples of the Pacific have strikingly different technologies and modes of social organization, although the climate, the topography, and resources of the islands they inhabit are similar.² The Prussians have for centuries been semifeudal and highly militaristic, while the Danes, who inhabit adjacent and comparable territories, have been democratic and pacifistic.

Moreover, geographic areas and cultural areas do not always coincide. The southwest coastal areas of Norway are, for example, climatically more like those of France than the rest of Norway; but the inhabitants are culturally as well as politically Norwegians and no more resemble the French than do the English. The climate of San Francisco is much more like that of Liverpool than the immediately surrounding area; nevertheless the people of San Francisco are culturally indistinguishable from those who live in other parts of California and significantly different from the people of Liverpool. Culturally, people are divided by sharp lines that have little if any regard for geography. On one side of the upper Rhine the people speak German and are in most other ways German, while on the other side they speak French and are French. On one side of an imaginary line drawn across the North American continent, the people speak Spanish, eat spiced beans, and are politically and culturally Mexican, while on the other side they are American.

None of the more important differences between cultures can be traced directly to differences between the physical habitats in which those cultures evolved, and none of the changes that have occurred over time in a given culture can be directly related to geographic changes. In the first place, cultural adaptation to a given geographic factor may take any one of a wide variety of forms, the particular form depending not upon the geographic factor but other factors. In this respect, cultural adaptation is comparable to organic adaptation.³ Various plants and animals adapt in different ways to the particular natural characteristics of a region. In the second place, cultural adaptation, unlike biological adaptation, involves a modification of geographic factors. Through their culture men invariably change some aspects of their physical habitat to some degree or other.

Climate and Culture.—Climate is the least modifiable aspect of the physical habitat. By prayer, magic rites, the shooting of cannon to pro-

¹ See L. Thompson and A. Joseph, *The Hopi Way* (University of Chicago Press, Chicago, 1945).

² Compare these societies as described by M. Mead in *Coming of Age in Samoa* (Morrow, New York, 1928) and *Growing Up in New Guinea* (Morrow, New York, 1930).

³ For an elaboration of this point, see R. Mukerjee, *Man and His Habitation: A Study in Social Ecology* (Longmans, New York, 1940).

duce artificial thunder, and similar antics men have endeavored to produce rain when rain was desired, to secure winds favorable to a journey by sea, to drive away unwanted clouds, or otherwise to modify the climate of the region in which they live. Within the last few decades considerable progress has been made in the making of weather forecasts, to the end that people may prepare themselves for what is to come; and in a few instances devices have been developed for tempering mildly adverse weather conditions. Hedges of trees can be planted around fields to protect crops or herds from wind, breakwaters can be built to protect shipping from storm-driven seas, and orchards can be protected by stoves from light frosts. In the main, however, men must adjust to the climate of the region they inhabit rather than change the climate to suit themselves.

Only in travel literature and chamber-of-commerce advertising are climatic conditions ideal, and every culture necessarily includes some elements that serve as protection against or correction for the imperfections of the climate. The proportion of the total culture that is directed to these ends depends in the first place upon the extent to which the climate is adverse to human welfare. The cultures of all arctic dwellers are, for example, devoted in large part to the provision of warm clothing and heated habitations. Relatively little of any of the cultures of South Sea islanders, on the other hand, is directed toward clothing, housing, and other climate-adaptation techniques. Climatic adversity is, however, always to some extent, and in the modern world to a very large extent, a matter of social definition. What people will deem physically uncomfortable and therefore to be corrected depends, within limits, upon their cultural standards. It is not climatically imperative for those who live in southern California to provide themselves with much protection from the elements, and the aborigines did not bother to do so. The present inhabitants, however, have very much higher standards of physical comfort; and they utilize a considerable variety of devices to protect themselves from the modest variations in atmospheric temperature, the occasional rains, and even the glare of the sun.

The extent to which cultural devices will be used to offset climatic conditions depends also upon the character of the technology and the level of the arts. A people who preserve their fish or fruits or meat by drying them in the sun will find cloudiness and high humidity a disadvantage to be overcome, whereas a people who lead a hand-to-mouth existence would be unconcerned about these conditions. When textile making was a handicraft process, the humidity of the room in which spinning and weaving were done was of no great importance. But with the development of mechanized, high-speed spinning and weaving high humidity was necessary to prevent the breaking of yarns. Thus for no

better reason than that it met this requirement, the region of Lancashire became the center of the English textile industry. Until very recently, the temperature and humidity of an industrial plant needed to be controlled only sufficiently to provide the workers with bearable working conditions. With the development of exceedingly close tolerances in machine fabrication, however, many factories have had to be air-conditioned so that atmospheric conditions can be kept constant and expansion and contraction of metals thereby avoided.

The culture determines not only the extent to which climatic conditions are offset, but also the particular ways in which particular climatic conditions are dealt with. The Pueblo peoples of the Southwest provided themselves with cool habitations by having thick-walled and almost windowless buildings. Today the same climatic conditions are overcome by more lightly constructed buildings with wide overhanging eaves to shade windows from direct sunlight and mechanical air conditioning to remove the heat that the walls do not keep out. The wandering tribes of Arabia have adapted to the aridity of the regions they inhabit by a tribal mode of life involving food-production techniques that require little water, simple but for them evidently adequate habitational devices, etc. In arid regions of the United States, on the other hand, contemporary Americans insist on living in towns and cities, growing grains, fruits, and other water-consuming plants, and otherwise maintaining much the same sort of life that they would in regions of higher rainfall. In order to do so, they have had to borrow all available irrigation techniques and invent many new ones.

Climate and Civilization.—In recent centuries the great cultural developments of the world have occurred in western Europe and North America. This fact has given rise to the idea, popularized by Huntington,¹ that the climatic conditions of temperate zones have mothered civilizations and that a high level of culture can neither be developed nor maintained elsewhere. Among the assumptions involved is that the temperate zones have a specific type of climate, one that encourages cultural development by being in all ways moderate. Within the geographically defined temperate zones there are, however, wide climatic variations; and the term "temperate" is in many instances a misnomer. There is nothing mild about north German winters or Spanish summers; but both north Germany and Spain contributed much to the rise of Western civilization. There is certainly nothing very favorable to mechanized agriculture about the heat and dust of a Kansas summer, nor is there anything favorable to machine industry about the cold and ice of New England winters; but each of these areas has been the respective center for the development of

¹ E. Huntington, *Climate and Civilization* (3d ed., Yale University Press, New Haven, 1924) and *Mainsprings of Civilization* (Wiley, New York, 1945).

mechanized agriculture and machine industry. In neither area did the climate encourage what arose; it set the climatic conditions, rather, that had to be overcome before any developments could occur.

Western peoples have so far had limited success in settling and exploiting the tropics and the arctic regions. The reason is not, however, that the climates of these regions are inherently inhospitable to a civilized mode of life, but that Western civilization has developed in and is appropriate to the conditions of the temperate zones and cannot be transferred without modification to regions of markedly different climatic conditions. This fact is most clearly seen in regard to the material technology. In the more humid tropics, for example, many of the materials of Western culture—shoes, textiles, paper, etc.—are attacked by molds and other destructive organisms; and exposed metals quickly rust away. In the arctic regions oils and greases change their characteristics, metals display new properties, canned foods freeze and burst, etc. In desert heat, all materials dry out; paints bleach and blister, plastics curl and grow brittle, and all ordinary machinery is ground up by sand. All the equipments of modern civilization can, however, be adapted for use under these various climatic conditions, as our armed forces soon discovered during the course of the latest war.

Historically, Western peoples have tended to transfer their culture unmodified to the tropics, the arctic regions, the jungle, and the desert when they have moved to those places. And since some elements of their culture have been inappropriate—the clothing and housing techniques and habits of Europe and North America are, for example, suitable neither to the tropics nor the arctics—they have developed a marked prejudice toward those regions. But where Western culture has been adapted to the special climatic conditions of the new region, that region has then become little if any more inhospitable than the temperate zones.¹ Americans have already demonstrated that when appropriate techniques are used living is no more unpleasant in the heat of the Canal Zone than in the heat of a Michigan summer, and the Russians have recently proved that with appropriate modifications civilized modes of life can be maintained north of the Arctic Circle. The Russians have also shown that harsh winter weather can actually favor military combat if armaments, tactics, and strategies are geared to subzero weather.

The relationship, if any, between climatic factors and the physical vigor of a people is little understood. Widespread is the belief that southerners are indolent because of the heat. Associated with it is the belief that northerners are narrow-minded and penurious because of the harsh conditions of life imposed by a cold climate. Apparently most of the peoples

¹ For data on this point, see A. G. Price, *White Settlers in the Tropics* (American Geographic Society, New York, 1939).

of the Northern Hemisphere subscribe to these ideas. From northern to southern Norway, Scotland, England, Germany, France, Spain, and Italy, the belief that those who live to the south are softer, physically less vigorous, and mentally less alert and enterprising prevails. The Prussians, for example, look down upon the Rhinelanders; the Alsatians look down upon the Provençals; and the Piedmontese look down upon the Romans. The same idea is fairly prevalent from north to south in America, and it appears among the insular Japanese and the continental Chinese.

The fact that some hundreds of millions of people believe that the heat of the south has a deleterious effect upon the physical vigor of those who reside there does not, however, make it true. In the first place, "the south" and "the north" are everywhere social rather than climatic distinctions, and what is the north for one region is the south for another. The lazy southern Irish, for example, are separated from the vigorous northern Irish by a political and cultural rather than climatic demarcation; and the southerners of Germany live to the north of the northerners of France, while the southerners of France live north of the northerners of Italy. In the second place, the physical vigor of a people of any particular region as measured by their cultural activity has not been constant. During the early Middle Ages southern France was the center of French civilization, but it has long since given way to northern France. In the fifteenth century Spain was the center of European political, economic, and intellectual life; but today it is a social backwash. In the days of the early industrial revolution the center of activity in the British Isles was along the Clyde; but subsequently it moved southward to Manchester. And while today the southern sections of the United States are politically and economically subordinated to the northern sections, two centuries ago the reverse was true.

The health and vigor of a people are products of many variables, of which the climate of the region they inhabit is perhaps the least important.¹ The food supply, the standard of living, the techniques of sanitation, the medical practices, and, equally important, the incentives to action are the principal factors that determine the physical health and the social endeavors of a people and, thus, the character of their social life. And all these factors are cultural rather than natural.

Topography and Culture.—Although it assumes less importance in folklore, topography has actually had much more influence than climate upon the growth of cultures. A mountainous terrain does not automat-

¹ For a recent attempt to make climate the determinant of health and vigor, see S. F. Markham, *Climate and the Energy of Nations* (Oxford University Press, New York, 1944). For another attempt to do the same thing, see C. A. Mills, *Climate Makes the Man* (Harper, New York, 1942). W. F. Ogburn's review of this book (*Amer. J. Sociol.*, vol. 48, pp. 784-787, 1943) provides an excellent, concise statement of the limited role of climate upon human health and culture.

ically produce a hillbilly mode of life, coastal plains do not necessarily nurture a plantation system, nor do river valleys inevitably produce an urban civilization. But the topographical characteristics of a region, together with the existing techniques of transportation, do determine the ease with which people may move into, out of, and about that region. In this way the topography either encourages or discourages social isolation.

Most cultures, it will be recalled, develop and change in considerable measure through the borrowing from abroad of techniques, ideas, and social practices. Mountains, broad rivers, jungles, and other physical barriers have historically been an important factor in retarding the cultural development of many peoples. For a physically isolated group has little opportunity and less inclination to borrow and, hence, tends to become culturally ingrown and static. The inhabitants of rugged interior Brittany, for example, are politically French; but their language, agricultural techniques, and social institutions are more akin to those of the Celts of Roman times than to those of modern Frenchmen. The Basques, who inhabit the inaccessible valleys of the Pyrenees, have been little influenced by the cultural developments and historical events of the past few hundred years. They still preserve their matriarchal form of family life, although the Spanish to the south and the French to the north have been patriarchal for perhaps two thousand years. Many of the native tribes of interior South America are so isolated by swamp and jungle that they have still to profit from contact with European culture; and up to the time of the Second World War most of the peoples of Melanesia and Polynesia were sufficiently untouched by Western influences so that they were good subjects for anthropological study. Here in America the culturally isolating influences of rugged topography are illustrated by the exceptional cultural provincialism of the hillbillies of Tennessee and Arkansas.¹ Many of the cultural attributes that were brought here from Scotland by the original settlers in these hill regions have persisted almost unchanged by external influences.

Whereas physical isolation has encouraged social isolation, physical accessibility has in many instances fostered the borrowing of cultural elements from abroad. As was indicated earlier, the location of the Greek city-states was one of the factors involved in their becoming at one time the cultural trading post of all the Mediterranean cultures. Likewise, the physical aspects of Britain, especially London, fostered Britain's becoming the great cultural trading post of western Europe centuries later. The excellent natural harbors and the strategic locations of New York and

¹ For another and more detailed example, see O. W. Juneke, *Isolated Communities: A Study of a Labrador Fishing Village* (American Book, New York, 1945).

San Francisco on the east and west coasts of North America contributed significantly to the development of both these cities, even as the position of Chicago as the jumping-off-place to the old Northwest gave impetus to its early growth, and a few decades later the position of St. Louis as the departure point for the Far West fostered the development of that city into the economic, political, and social center of the central Mississippi valley.

Culture and Topography.—At least since the time that men first invented boats and wagons, physical isolation or accessibility has, however, been in part a matter of cultural determination. And each new transportation device has in some way or other modified the significance of mountains, rivers, seas, or other topographical factors. In many instances cultural developments have actually converted what were barriers into routes of travel. Until close to the end of the fifteenth century, for example, the Atlantic Ocean had effectively isolated the aborigines of the Americas from Europe. With improvements in ship technology and in navigation and the discovery of the Americas by Columbus it then became easier for Spaniards to get to America than for them to reach near-by Switzerland.

Topography, unlike climate, is subject to considerable cultural modification. Until recent times, however, the effects of man upon the topography of his physical habitat were distinctly limited; he could by cultural developments change its meaning for him, but he could do little to change the topography itself. Present technologies make possible really significant reshaping of the habitat to conform to human desires. If a harbor is wanted where no coastal indentation happens to exist, one can be carved out of the land. If a mountain obstructs a projected railway route, it may be tunneled through. If a hill stands where an airport is desired, it can be leveled off.

Because modern men possess so many devices for circumventing natural barriers and for reducing obstructions to their movements, topographic factors have become increasingly less significant. The most important aspect of the physical habitat today is not topography but natural resources. Whatever the topography, however rugged and inaccessible the terrain, the inhabitants will not long remain isolated if their habitat happens to contain some substance, such as gold or tungsten or uranium, that the outside world has come to value.

Natural Resources.—The natural substances of the earth are widely and randomly distributed. The soil of a valley may be deep and naturally fertile, while that of the adjacent hillsides may be shallow and unproductive; within a single field the depth and fertility of the topsoil may range from inches to feet and from sand to loam. Coal and oil deposits

would seem to be located almost everywhere, but workable concentrations of these materials are scattered and irregularly placed. The various clays and minerals are likewise distributed about the earth in what is for man an entirely haphazard fashion.

The location of natural substances affects the spatial distribution of peoples about the earth and the characteristics of their various cultures insofar as those substances are defined as natural resources. Natural resources are those substances that are socially useful in terms of a particular technology. To an agricultural people soil fertility is the basic natural resource; to a fishing people, on the other hand, the fertility of the land on which they live is unimportant. Since what constitutes a natural resource is thus a matter of cultural definition, the effect of the distribution of the natural substances on the distribution of peoples varies from society to society and changes over time. Until close to the end of the eighteenth century, for example, the distribution about the earth of coal deposits had no bearing whatever on the distribution of peoples or the characteristics of their societies. For not until then did coal begin to have value as a natural resource.

The significance to man of the presence or absence of any natural substance is thus entirely dependent on his culture. Each technology necessarily develops in terms of the natural substances available. Techniques of agriculture could hardly evolve in a region where the soil was inherently sterile; modern industrial technologies could not have developed in a region where there was no coal and iron ore; and only a people who had access to uranium could have devised a method of releasing atomic energy that required uranium. The presence of a particular earth substance does, therefore, permit the development of a technology that utilizes that substance. But the existence of any substance in a region in no wise assures that it will be defined as a natural resource by the inhabitants of that region. To the native Americans the most valuable of the earth's substances were flint and obsidian, from which arrowheads and other tools were made, certain clays, from which war paint was manufactured, and a soft stone, from which peace pipes were constructed; and the tribes that controlled supply sources of these substances were, by aboriginal standards, wealthy. For them coal and oil did not exist, and the exceptional fertility of such regions as the Mississippi valley was of no direct importance. The presence within a given region of any particular natural substance does not therefore assure the development of a technology based on that substance, nor does the definition of that substance as a natural resource assure this. Fertile soil or the raw materials of industry, for example, even when they are defined as natural resources, do not assure the development of an agricul-

tural or an industrial society, so many and so varied are the cultural factors involved.¹

Social Geography.—Within recent years many geographers have shifted their attention from mapping and describing the physical characteristics of the world to mapping and describing the social characteristics of the people who inhabit the world. Much of this work, such as the tracing of trade channels and trade relationships, is sound and of scientific value. But there has been a distinct tendency for geographers to carry over into their study of human affairs an exaggerated sense of the importance of the physical habitat to social life. The various specialties within the general field of social geography—human geography, having to do with the spatial distribution of peoples; economic geography, having to do with the economic life, trade practices, and interrelations of various peoples; and political geography, having to do with the division of peoples into politically discrete units and the interrelations, warlike or peaceful, between such units—have tended to explain what they study in terms of climatic or topographical factors or the presence or absence of certain natural resources. This tendency has culminated in a revival of geographic determinism, one of the most absurd forms of which, the geopolitical doctrine of topographical determination of political history, was advanced by German philosophers to justify the German ambition to become the political masters of all Europe.²

The absurdity of attributing social phenomena to the characteristics of the physical habitat in which those phenomena occur is easily demonstrated. The location of a commercial city, for example, cannot be explained in terms of topographical factors any more than the economic and military power of a nation can be explained by its wealth of natural resources. A city is a product of many things, mostly cultural and historical. Topographical factors no doubt encouraged the location of such great ports as New York and San Francisco, for it was advantageous for men to build where nature had provided fine harbors when men came and were prepared to build port cities. But topographical factors strongly discouraged the location of commercial centers where the cities of Los Angeles and Denver now are, and yet culture and history brought these cities into being.³ No doubt in terms of the eighteenth century, London

¹ All of which is ignored in a recent attempt to find in the mineral content of the soil of each region the explanation for the "racial" characteristics of the inhabitants. See J. R. de la H. Maret, *Race, Sex, and Environment: A Study of Mineral Deficiency in Human Evolution* (Chemical Publishing Company, New York, 1940).

² See N. Spykman, *The Geography of the Peace* (ed. by H. R. Nicholl, Harcourt, New York, 1944); and R. Strausz-Hupé, *Geopolitics: The Struggle for Space and Power* (Putnam, New York, 1942). For other references on geopolitics and other forms of geographic determinism, see Supplementary Bibliography 4.

³ For a discussion of the many factors, geographic, historical, and cultural, that enter into the founding and growth of a city, see C. F. Schmid, *Social Trends in*

was well located as a center of commerce; in terms of modern means of transport, the lower Thames, tideswept and shallow, is no fit place for a port. Yet London, because of history and culture, remains the greatest port of England.

History and culture rather than the physical habitat likewise determine the wealth and prestige of modern nations. No modern nation can be powerful without ample natural resources, but resources do not of themselves give weight in international affairs. Technology, effective economic and political organization, and all the other social factors that make possible the conversion of iron, coal, oil, and other materials into economic or military material are fully as important as the resources themselves. Superior technology and organization may go far to offset limited resources; inferior technology and organization may nullify exceptional resources. The present position in international relations of the United States, for example, is made possible by but is not explainable in terms of the natural resources of North America. Those resources were here long before the United States came into being and during the century and more that the United States was a pigmy among the nations. And many of them could be used up without impairment to the present status of the nation, provided only that cultural developments offset their loss.

VARIATIONS IN THE PHYSICAL HABITAT

The physical characteristics of a particular area are not fixed and unvarying; they change. Day gives way to night; summer passes, and winter takes its place; and occasionally a violent storm may sweep the land. Some years the rainfall is light, and other years it is heavy. The river washes away its banks or cuts new channels in the valley floor; and the fertility of the soil is used up. The range and character of such variations in the physical habitat differ from region to region and in some instances are affected by man himself. Every physical habitat is, however, in some ways and to some degree a variable; and if a social group is to survive, the culture must provide means of adapting to the variations in the habitat as well as to its stable characteristics.

Many of the elements of every culture serve as adaptations to the cyclical, periodic, and intermittent variations of the physical habitat. A technology and organization that made it possible for a people in the temperate zone to produce food during the summer months would, for example, be incomplete unless it also enabled them to preserve and store

Seattle (University of Washington Press, Seattle, 1945). See also A. R. Mangus, "Regional Aspects of Contemporary Culture" (*Amer. Sociol. Rev.*, vol. 4, pp. 506-515, 1939); and R. P. Martin, "The Influences of the Exploration and Settlement of an Area upon Its Later Regional Character" (*Amer. Sociol. Rev.*, vol. 9, pp. 503-507, 1944).

food to carry them over the bleak winter period. The variations in the physical habitat give variety to the life of the social group, providing a daily or annual sequence to their activities; and some variations impel modification of some elements of the culture. There is, however, no direct and constant relationship between variations in the physical habitat and variations in the character and tempo of social life. All the attempts, and there have been many, to explain fluctuations in crime, suicide, and birth rates, "cycles" of business activity, and the rise and decline of nations in terms of variations in the physical habitat overlook the fact that social life is cultural and that culture always mediates between man and his physical habitat.

Daily and Seasonal Cycles.—The simplest and most obvious of the recurrent variations in the physical habitat are the alternation of day and night and the progression of the seasons. Although social life is everywhere geared to these changes, the specific effects upon a people of the daily and seasonal cycles are determined by the character of their particular culture; and the more complex and ramified their culture, the less their activities will be governed by the daily and seasonal cycles.

In the dim and distant past men were no doubt diurnal creatures; they rose with the sun and retired upon its setting, in the manner of horses, pigs, and chickens. But since the time that men began to use fire, they have been able to light their habitations and to light their way about the land during the hours of darkness. The extent to which various peoples could ignore the coming of night and plan their daily cycle of activities irrespective of the sun has been determined mainly by the effectiveness of their lighting devices. With the recent development of cheap and efficient electric lighting Western peoples have become emancipated from dependence upon daylight. As a consequence, the day-night cycle has far less significance in contemporary Western societies than it has had in times past. If he chooses, the farmer can plow his field at night and do his sleeping during the daytime. If business conditions warrant his doing so, the manufacturer can run his plant both day and night. Even war can now be conducted on a twenty-four hour basis.

Cultural developments have recently brought about a similar although more limited emancipation from the seasonal cycle. In all the older societies there was a close relation between the seasons and various social activities. Sailing ships were dependent upon the winds, which in each region vary seasonally; and wagons could move only when the earth was dry. Today men travel when they please rather than when the season permits; for modern steamships, railroads, automobiles, and airplanes are comparatively indifferent to the weather. The work of agricultural peoples has always been dependent upon the seasons, and rural life is still closely tied to the seasonal cycle; school terms are scheduled to give

farm youths an opportunity to assist their parents at the harvest, county fairs come when the crops are in and there is time for leisure, etc. In many respects, however, the modern rural family is no more dependent upon the seasons than is its urban counterpart. Both live in heated and may shortly live in cooled habitations, and both may and many do eat very much the same foods throughout the year. The social isolation that characterized farm life during harsh winter weather has been considerably lessened by the development of good roads, snow plows, telephones, radios, and R.F.D.; and the monotonous and nutritionally inadequate winter diets of all people, rural and urban, who lived in regions of cold winters have been greatly expanded and improved by new modes of transportation and food preservation. For while man cannot control the cycle of the seasons, he is becoming increasingly able to reduce the effects of seasonal changes upon his life.

Natural Catastrophe.—Irregular and infrequent changes in the physical habitat—earthquake, flood, drought, tidal wave, typhoon, and other natural catastrophes—are seldom adequately provided for in the culture. Each region is subject to some natural catastrophes, but their occurrence is usually so rare that the members of the group “forget” whatever they learn from one catastrophe by the time that another one comes along. As a consequence, a natural catastrophe is often a social catastrophe—a tidal wave wipes out the fishing village, an earthquake destroys the town, a drought means famine, and a flood means disaster and subsequent famines. For more than two thousand years, for example, the Yellow River of China has from time to time spilled from its banks, inundating thousands of square miles of agricultural land, destroying homes, fields, and livestock, and drowning tens of thousands of people. After each flood, the survivors have cleared their fields, rebuilt their homes, and, as best they could, resumed their former lives. The same thing has happened in the Mississippi valley and in the valleys of its tributaries; and, although levies have been built and engineers have struggled against both the rivers and public apathy, floods are an increasing rather than a diminishing hazard for those who live in the lower valley.¹ So far, whatever has been accomplished to restrain flood waters has been more than offset by other human activities—by the breaking of the sod lands, the draining of swamps that formerly served as run-off basins, etc.

In those few regions where earthquakes are frequent enough, the inhabitants construct their buildings in anticipation of earth shocks. Most earthquakes, however, come so infrequently that little if any preparation is made for them. Each disaster is treated as unique. San Francisco, for

¹For the consequences of the latest and most disastrous flood, see *The Ohio-Mississippi Valley Flood Disaster of 1937* (Report of Relief Operations of the American Red Cross, A.R.C. 977, Washington, D. C., 1938).

example, is today only slightly better prepared to withstand a severe earth shock than it was in 1906.

Modern societies have developed some organizational means, such as the Red Cross, for dealing with social disasters after they have occurred. But in general, modern societies are no better prepared to avoid the social consequences of natural catastrophes than were the societies of the past. Moreover, modern men utilize and depend upon such large physical equipments, and they modify their physical habitat so very much, not always with foresight, that natural catastrophes may have even greater social consequences today than they did in former times.

Periodic Fluctuations in Climate.—The climate of most regions is subject to periodic fluctuations over the course of years. For a few successive years the annual rainfall, for example, may be greater than the long-run yearly average, then for a few years following it may be less. The same thing may happen in respect to temperature, sunlight, and humidity. Whether or not they follow a true cycle is debatable, but periodic fluctuations of some sort apparently occur everywhere. In agricultural regions fluctuations in the climate often mean that two or more years of high production are followed by a period of low production. Unless provision is made during the period of high production for the lean years, those lean years are times of famine and associated social disturbances. The Bible speaks of the seven-year storage program of Joseph in ancient Egypt, which at least suggests that men have long been aware of the importance of periodic fluctuations in the climate. Today the effects of climatic fluctuations are somewhat tempered by modern means of transportation and economic organization, which permit a region of plenty to supply food to one of reduced production. Yet paradoxically, no contemporary society, in a day when men are capable of such extensive control over nature, actually prepares during the fat years to tide over the lean.¹

GEOLOGICAL CHANGES AND SOCIAL HISTORY

Not only is the physical habitat subject to the recurrent variations that have just been discussed, but it also is subject to changes in its basic characteristics over the course of time. Geologically, mountains, rivers, coast lines, and climates are temporal. Temporal also are most of the civilizations that men have developed upon the earth. The world is littered with the remains of prehistoric peoples who evidently developed elaborate and complex cultures and then lost out in the struggle to survive; and during a single millennium of the historic period some five

¹ See, for example, C. Taeuber, I. Taeuber, and C. C. Taylor, *The People of the Drought States* (Works Progress Administration, Washington, D. C., 1937).

great cultures grew up and languished away around the Mediterranean basin. Drawing upon the idea that geography determines the characteristics of a society, some social historians have endeavored to relate the larger events of social history to geological changes in the habitats in which those events occurred.

Climatic Changes and Social History.—The standard version of what might be termed the “geological interpretation of history” begins with the assumption, mentioned earlier, that civilization can and will evolve only under ideal climatic conditions. The rise and fall of particular civilizations is then traced to correlate changes presumed to have occurred in the climates of the regions in which those civilizations developed and then disintegrated. Thus it has been supposed that some ten to twenty thousand years ago there began to come about a gradual improvement in the climates of the valleys of the Nile and the Euphrates and Tigris rivers. This improvement in the climates is supposed to have enabled the peoples who inhabited these regions to obtain their food with less effort and thus to have given them time to devote to refining their habitational and other techniques and to developing complex forms of political, religious, and military organization, the end products of their efforts being the civilizations of Egypt and Mesopotamia. Later, so the theory runs, the ideal climate that nurtured these civilizations began to deteriorate; and Egyptian and Mesopotamian societies literally withered away for want of water. The fact that both regions are now semiarid is taken as proof that climatic changes brought about the decline of these two civilizations. Carefully ignored, however, is the fact that the ruins of both societies indicate the use of elaborate techniques for irrigating fields and supplying water to urban populations.¹

Over the course of time some regions have no doubt grown drier and some moister, some warmer and others colder. But climatic changes of this sort take place in the geological scale of time, and this scale has no perceptible relation to that of human history. The last marked change in the climates of the earth that is known to have occurred was during the fourth glacial epoch, which reached its apex an estimated 50,000 years ago, after which the ice cap began to recede. Perhaps that recession is still in process; possibly another glacial age is in the making. But neither possibility need concern either the members or the students of society,

¹Aware of the inadequacy of geological evidence with which to support the climatic interpretation of the rise and decline of Mediterranean civilizations, but nevertheless determined to uphold that theory, Huntington (*op. cit.*) found confirmation in the record of the growth rings of the Giant Sequoia in California. These rings show that the climate of California has been growing somewhat warmer and drier over the past few centuries. How much warmer and drier and what relation the climate of California bears to that of Central Asia and the Mediterranean region are not indicated.

for the time scale by which the progress of a glacial age is measured has no relation to the time scale by which social changes are measured. Recorded history runs back five millenniums at best, and vast social changes may occur over the span of a single century. In geological time five thousand years is just a moment, and a century is no time at all.

The rise and fall of civilizations, as of all things social, are matters of cultural development and cultural disintegration. By the development of irrigation techniques and techniques of organization for applying them, the peoples of the Nile and of the Euphrates and Tigris valleys made semiarid regions lush and productive. When for social reasons they lost the ability to maintain those techniques, the regions were no longer productive, and civilized life disappeared. Within the past fifty years men have pushed the grain-producing areas of North America well up toward the Arctic Circle, not because the climate there is favorable to growing grain but because they have developed grains that will grow where nature did not intend them to. Civilization is moving, in effect, into the far north. But whether or not it persists there depends upon a great variety of factors, all of which are cultural and subject to change, irrespective of the climate.

Topographical Changes and Social History.—With very limited and local exceptions (regions in which there are active volcanoes), geological changes in the topography as well as in the climate are too slow to have social significance. As a consequence of his technological practices, man himself, however, may induce modifications in the topography of the area he occupies; and these in turn may affect his culture. Some of these man-made changes, such as the dredging of rivers to make them navigable and the tunneling of mountains to eliminate barriers, are deliberate and constitute improvements on the natural topography. Others are unintentional by-products of man's day-to-day treatment of physical nature; and they may in time constitute a significant and adverse change in the topography of the region.

Much of the topography of China, for example, was changed over the centuries by deforestation and other human acts that led to soil erosion in the western mountain regions; and it is possible that this man-made deterioration of the lands in the west fostered the historical shift of the centers of Chinese civilization from west to east. At any event, the gradual stripping of the topsoil in the western regions loaded the rivers with silt, which, deposited in the lower channels, led to periodic floods, the destruction of fields, resulting famine, etc. Within the past fifty years a similar change in the topography of the Mississippi valley has been set under way. The breaking and cultivation of the semiarid lands on the west side of the valley has begun a large-scale movement of the topsoil downhill and down river, where it greatly aggravates the problems of

flood control. Elsewhere in America the draining of swamps to secure new tillable lands has often had the long-run result of destroying other more valuable lands, either by making them subject to flood or by denying them the water that had seeped down during the dry season from these natural reservoirs.

The recent increase in the ability of men to shape topography to their own ends is not without its dangers. Unless dams, drainage canals, irrigation ditches, and other improvements on nature are constructed with an eye to their long-run effects, men may easily destroy natural conditions upon which they are dependent. This danger is well known to the technicians who do the actual tinkering with nature; it is not yet comprehended by the political pressure groups who determine, with their eyes on short-run objectives, what shall and shall not be done to the topography.

TECHNOLOGY AND THE EXHAUSTION OF NATURAL RESOURCES

In general it may be said that the higher the level of the arts, the less restricted a people are by the climatic and topographical aspects of the region they inhabit and the more dependent they become on its natural resources. Natural resources, unlike climate and topography, are destroyed in use. As a consequence, the relationship between natural resources and society is entirely different from that between climate and topography and society. In putting the climate and the topography to use, man never changes the former and only slightly modifies the latter. But when man puts a natural substance to use, he immediately begins to reduce the supply of that substance. A people cannot "eat" themselves out of climate; they may, however, eat themselves out of some substance upon which they have come to depend.

Modern Technology and Resources.—The available supply of any natural substance depends upon knowledge of its location and the techniques for its extraction. The world's available supply of oil, for example, is infinitely greater today than it was at the turn of the century. The total or ultimate supply of all the natural substances upon which man has so far become dependent is, however, limited.

Up until about two centuries ago, the natural substances that man had learned to use were, with one important exception, either so vast in quantity or used up at such a slow rate that consumption of natural resources was of no practical importance. The one exception was soil fertility. Either by adverse modification of the topography, already discussed, or by mining the soil, some agricultural peoples so impoverished their lands and thereby reduced the natural resources upon which the

society was dependent that some sort of modification had to be made in their cultures. In contemporary Western societies soil exhaustion comes about less as the result of inadequate knowledge and techniques than as a consequence of exploitative forms of social organization. In America, for example, tenant farming has always been improvident farming; under intensive competition for the market, even land owners have operated on a short-run basis; and during times of war, when labor and fertilizers have been scarce and the demand for food urgent, there has been a distinct tendency to draw upon reserves of soil fertility. So exploitative have been the methods of land usage here in America that during the course of a century some of the most fertile lands have been impoverished; and profound results, particularly apparent in the rural areas of the South, have been felt by the inhabitants of the impoverished regions.¹ Attempts are now being made to introduce such conservation techniques as contour plowing, crop rotation (known to the ancients), etc. But good husbandry is today more a matter of political and economic organization than of technical knowledge.

As a consequence of developments in the realm of technology over the past two hundred years, Western peoples have come to depend increasingly upon coal, oil, gas, and many other earth substances; they have learned to locate and extract these substances from the earth; and they have built a variety of new modes of social life around their use. Since the natural substances upon which modern societies are dependent are far greater in number and are consumed at a far higher rate than were those of premodern societies, the future of contemporary societies depends to a much greater degree than did the future of previous societies upon ability to maintain the supply of natural resources. Western societies have become adjusted to and dependent on industrial technology and its products; and, characterized by a massing of people in urban communities, Western societies require for their maintenance cheap and rapid communication and transportation. Loss of any of the primary resources upon which they are dependent will force a whole new series of social adjustments, comparable in character, if not in degree, to those that were set off by the advent of the industrial revolution.

Inexhaustible Resources.—Some industrial resources are to all intents inexhaustible. Iron, the basic material of the machine age, is, for example, so widely and heavily distributed about the earth that a world shortage of iron is inconceivable. Local supplies of iron, particularly of the high-

¹ The importance of this, as of any other factor, can however be exaggerated. See, for example, W. C. Bagley, *Soil Exhaustion and the Civil War* (American Council on Public Affairs, Washington, D. C., 1942). For a field investigation of the problem, see J. L. Hypes, "The Social Implications of Soil Erosion: A Case-study" (*Amer. Sociol. Rev.*, vol. 10, pp. 375-382, 1945).

grade ores, are, however, definitely limited. Since the heavy industries have been located where high-grade ores and also coal were readily available, profound readjustments will become necessary as those ores (or the coal, or both) become exhausted. Ultimately the German Ruhr, the English Midlands, and the American Pittsburgh will exhaust one or another of the resources upon which they are dependent. Already the Mesabi Range supplies of high-grade ores, upon which most of the heavy industry of the United States has been based, are nearly gone. Unless new and equivalent sources are soon discovered, which is unlikely, the United States will have to begin to import high-grade ores or else to develop economically feasible means of using inferior ores, vast quantities of which are available. In either case the centers of heavy industry will, all other things being equal, shift to new ore and coal sources; and the shifting will precipitate a variety of social disturbances.

As iron and many other natural resources become exhausted, technological developments may provide alternative substances to take their place. There is already some expectation, for example, that the new light metals will, along with synthetics and pressed woods, displace iron and steel in many uses. They will hardly relegate iron to a secondary position, but they may somewhat lessen the rate at which good iron ores are now being exhausted. Although the extraction of the light metals requires tremendous expenditures of power, the sources of these metals are to all present intents inexhaustible. The best bauxites, from which aluminum is secured, are limited; but clays containing aluminum are found almost everywhere and in vast quantities. Magnesium, the new hopeful of the metal trades, is obtained from sea water. Some metals, such as tungsten, are used in such small quantities and are so widely distributed about the earth that they present no foreseeable problem. The world's known supplies of lead, tin, and copper have already been seriously depleted; but for most of the uses now made of these metals effective substitutes are already available.

The exhaustion of local supplies of one or another of the raw materials of industry or the opening up of new sources of supply will in the future as in the past induce a continual shifting of industry and hence of people. But there is no reason to suppose that the industrial age and all that this term implies will someday come to an end because of a lack of materials from which to fabricate the machines, cities, homes, ships, automobiles, planes, and other structures and mechanisms upon which the age depends. There is no danger that the machine age will destroy itself by eating up the materials from which to make machines.

Exhaustible Resources.—There is, however, at least some possibility that the machine age may in time run out of the power with which to make and run the machines of modern civilization. Power, rather than

metals, is the key to industrial life. Until the eighteenth century the only important nonorganic power was that of the wind, used to drive ships and grind grain. Most of man's work was done by organic power—his own or that of his ox or ass. Today, little organic power is used. The machines of modern societies are fabricated and run by nonorganic power, derived mainly from the burning of coal and oil; and any pronounced falling off of the supplies of nonorganic power would make an industrial revolution in reverse inevitable.

With one exception, hydroelectric power, present power sources are limited and are being used up at a constantly increasing rate.¹ No one knows, least of all the coal and oil industries, how long the machines of the world can continue to be powered with coal and oil. Some of the best European sources of coal are already close to exhaustion. The Welsh mines, for example, now reach more than five miles out under the sea; and every mile that they are extended brings closer the day when they will necessarily close down. These mines, like many of the mines in Europe, have already been in operation for close to two centuries; and the rate of extraction has been rising, most spectacularly during the past few decades. Someday, probably in the not-too-distant future, European industry will begin to feel the pinch of rising coal costs; and unless some new factor intervenes, the industrial position of Europe will begin to decline. Although American coal reserves seem at the moment to be ample, much of the anthracite has been used up, and some of the best reserves of soft coal are approaching exhaustion. So far as the world as a whole is concerned, known coal resources are estimated to be sufficient for between five hundred and a thousand years; but these resources will be consumed in a fraction of that time if the present rate of increase in consumption continues. Today not over one-third of the population of the world is industrialized; and of those peoples who are, only a small proportion secure all the benefits of the machine age that they would like to enjoy. Every extension of industrialization—and the latest war has greatly stimulated the spread of machine technology—increases the drain upon the coal reserves of the world.

The situation in regard to oil is even more alarming to those who worry about the exhaustion of natural resources.² Known oil reserves are just about adequate to fuel another war like the latest one. The rate of dis-

¹ For the technological developments that brought coal and oil into use, the known reserves of coal and oil, and the rising rates at which they are being consumed, see I. Lubin's article, "Coal Industry" (*Encycl. Soc. Sci.*, vol. 3, pp. 582-600) and G. W. Stocking's article, "Oil Industry" (*Encycl. Soc. Sci.*, vol. 11, pp. 438-451).

² As do B. T. Brooks, *Peace, Plenty and Petroleum* (Cattell, Lancaster, Pa., 1944) and W. T. Thom, *Petroleum and Coal, The Keys to the Future* (Princeton University Press, Princeton, 1929). For evidence and arguments in support of the view that the potential supplies of oil, as of coal, are so great that there is no danger of

covery of new sources of oil has not of late kept pace with the ever-rising consumption rate; and it is only within the last fifty years that oil has become a major source of power. New oil pools of undetermined extent are known to exist in the arctic regions, and there are thought to be huge undersea pools. Exploitation of such sources will, however, necessarily be costly; and the rapid exhaustion of local supplies will inevitably mean marked readjustments of all activities that are based upon oil. The anticipated depletion of American oil reserves would not mean for Americans the end of the automobile or the untimely death of the airplane; but it would mean social changes of considerable magnitude—changes in the distribution of economic activities, changes in the international position of the United States, changes in technology to make less oil go further, or perhaps changes in the source of power used to motivate automobiles, ships, trains, and airplanes.

This last possibility, changes in source of power, is thought by many to be the ultimate solution to the exhaustion of oil reserves, both local and world-wide. Oils can be secured from coal, as has long been done in Germany, and from oil shales. The cost in terms of materials and labor is at present high, but technological developments and large-scale production may reduce the costs considerably. Any marked shift to coal-derived oil would, however, place a further burden on coal resources. It would also mean that oil-rich regions would suffer and coal-rich regions profit, for a time at least. Oil shale, of which the United States has a mountainous supply, would seem to be the last resort of an oil-starved world; and the present cost of extracting oil from shales is many times that of extracting it from coal.¹

The Inexhaustibility of Culture.—Those who like to view with alarm can make a good case for the rapid self-extermination of industrial civilization. As things now stand, the power resources of modern societies are limited in quantity and are being exhausted at a constantly rising rate. But natural resources are only one of the two factors in technology. The other factor, the culture, is an inexhaustible resource; and the loss of any natural resource now necessary to the maintenance of civilization can be more than offset by invention and discovery. Early in the industrial revolution, wood, a vital resource then necessary to the smelting of iron, was close to exhaustion in the industrial centers of Europe. But before the last tree was felled and turned to charcoal, the rising

their being exhausted, see L. M. Fanning, ed., *Our Oil Resources* (McGraw-Hill, New York, 1945). For other references on natural resources and their conservation, see Supplementary Bibliography 5.

¹At least one long-run worry, what to do for lubricating oils when all the oil, coal, and oil shales are exhausted, has already been eliminated. Excellent synthetic oils and greases—silicones—can now be produced from common sand. See *Time*, Dec. 11, 1944.

cost of wood had encouraged a search for substitutes. Coke, made from coal, was that substitute. And today, long before the last oil pool has been drained and the last coal field mined, a new and to all practical purposes inexhaustible source of power has been discovered in the atom.¹ At the moment it is widely feared that man will use atomic energy to destroy himself and all his works. What uses will in time be made of atomic energy are unpredictable. Ability to release that energy does, however, assure that modern civilization will have no reason to run out of power with which to build and operate its machinery.

¹ See H. D. Smyth, *Atomic Energy* (Princeton University Press, Princeton, 1945).

Chapter VI

CULTURE AND THE BIOLOGICAL HABITAT

QUITE as important to men as the physical characteristics of the region that they inhabit are the varieties, the numbers, and the distribution of plants and animals that share the region with them and that constitute the biological habitat. Nowhere on earth do men live in organic isolation; even on arctic ice pack and desert waste some organisms exist, and in most of the places where men live thousands of species of plants and animals are to be found. From among these plants and animals men must secure their food, and against many of them they must protect themselves. Control over the biological habitat is thus one of the major functions of every culture, and the success of a social group in part depends upon the scope and relevance of its control techniques.

Biological habitats vary widely from region to region, the biological characteristics of each region depending in considerable measure upon the climatic and soil conditions. The plants, animals, and insects of a tropical desert are different in character and fewer in number than those of a tropical jungle; those of a tropical jungle are different from those of a forested region in the temperate zone; and those of a forest in the temperate zone are quite different from those of adjacent plains or mountains. Thus each biological habitat, like each physical habitat, presents a somewhat peculiar set of conditions for cultural development. The techniques of food getting that might evolve in the jungle could not develop in the desert, where they would not apply; and those that might be devised by forest dwellers could hardly be invented or borrowed by plainsmen.

The relationship between culture and the biological habitat is, however, far more complex and intimate than that between culture and the physical habitat; for the biological habitat is an active variable, and it changes even as man attempts to change it. This fact has led some social historians to conclude that the major events of social history were caused by abrupt changes in the biological habitat—that the decline of Sumerian civilization, for example, was brought about by the introduction of malaria, which so debilitated the Sumerians that they either fell easy prey to barbarians or else became incapable of keeping their society in operation. Ideas of this sort are sometimes described as the “syphilitic interpretation of history,” a term derived from the fact that many students

of medieval society have tried to relate the many cultural developments that arose during that period to an epidemic of syphilis, which they suppose stimulated men's minds to creative endeavor even as it destroyed their bodies.

The Struggle for Existence.—Although biological interpretations of history or of cultural development are of course quite as unsound as geographic ones, any marked change in the biological habitat is certain to have important consequences to men. Changes in the biological habitat are constantly occurring and are occasionally marked, and any change that was not deliberately and calculatingly induced by man himself is almost certain to be unfavorable to him. Man must constantly struggle, with the cultural devices at his command, to wrest a livelihood from other organisms and protect himself against them. Those organisms were not designed for man's special benefit; man is just one of many species struggling to survive against the intense and unrelenting competition of other species. In that struggle nature—i.e., biological processes—is entirely impartial. She is quite as inclined to kill off man's crops with some disease as to let them come to harvest, quite as willing to let the infant die from infection as to thrive on nourishing food, just as considerate of mice as of men.

The problems of group adaptation to the biological habitat are everywhere and always complicated by the reluctance of that habitat to yield man the necessities of life. If in the modern world nature appears benevolent, that is only because modern men have learned to dominate their biological habitats so well that comparatively few people are actively and directly engaged in the struggle to maintain that dominance. Nonetheless, all the members of society depend upon the success of those few. Should control of the biological habitat be lost, the society would not long survive. The danger that modern societies will destroy themselves by exhausting their natural resources is far less than the danger, however remote, that through technical or organizational incompetence modern men may let some other organism get the upper hand.

CULTURAL DOMINANCE OF THE BIOLOGICAL HABITAT

Man secures and maintains dominance over his biological habitat by disrupting the operation of the natural ecological processes. These processes determine the numbers, the kinds, and the spatial distributions of trees in a forest, grasses in a meadow, fishes in a stream, etc., and result in a natural balance of numbers between the various species of plants and animals. In most instances, a natural balance of numbers is not conducive to the maintenance of any considerable number of human beings. The size and welfare of a social group are thus directly and constantly

dependent upon the ability of the group to keep the natural ecological processes "off balance."

A gardener, whether he cultivates food plants or flowers, is engaged in the attempt to keep nature off balance in his garden plot. To this end he weeds, sprays, and traps a great variety of organisms that are continually struggling to crowd out or eat up his cabbages or roses. If the gardener is successful, he will secure an unnatural number of cabbages or roses; if he fails to disrupt the natural ecological processes, his garden will fill with weeds and aphids and rodents as it returns toward a natural balance of species and numbers.

The Ecological Processes.—The materials to support life are everywhere limited, and every plant and animal species has tremendous reproductive capacity. Thus only a very small proportion of the seeds produced by plants and the eggs or offspring of animals can possibly grow to maturity. Which few of the many will survive are determined by the ecological processes.¹

The basic ecological process is competition between species and between members within each species for the space, food, moisture, and other conditions necessary for survival. Competition among plants takes the form of crowding one another out. All other things being equal, an established plant will take food, moisture, sunlight, etc., from a seedling. But since the needs of the various species of plants are somewhat different, competition among them results in some sort of balance between species; so many grasses, for example, will be able to survive in competition with dandelions, so many dandelions in competition with milkweeds, etc. In a similar way those animals, insects, and bacteria that subsist on the same kinds of plants vie with one another for the limited supply.

Between animal organisms and the plants or animals on which they feed a relationship of conflict exists. If the animal is to live, another animal or a plant must suffer. Competition and conflict together operate to keep down the numbers of each organic species. If any one species of plant or animal had no competitors or predators, that species would increase in numbers until it covered the earth. If, for example, all the rats born were to survive and procreate, their offspring would be so numerous that little food or room would be left for any other animals. But fortunately, many birds and animals eat rats, rats are subject to attack by a variety of diseases, and other animals compete with rats for food. Predators, diseases, and starvation combine to keep the world's supply of rats fairly constant.

¹ The sociological parallels to these biological processes will be discussed in Chap. XVI, Intergroup Relationships and Processes.

Not all organic species, however, compete or conflict with one another. Some are mutually interdependent, maintaining a symbiotic relationship. A tree, for example, may provide shade for the shrubs and ferns that grow around it, while they in return prevent the soil around the roots of the tree from washing or blowing away. Bees and some of the ants cross-pollinate plants, securing in the process the food on which they live. Some ants transport aphids to the plants upon which the aphids feed, themselves feeding on the secretions of the aphids. Some soil bacteria and worms, living on dead organic matter, produce soil foods for plants, which in time become food for the bacteria and worms.

The processes of competition, conflict, and symbiosis operate to determine the natural balance of numbers between all the various species of plants and animals in any region. The natural balance is not, however, fixed; it is continually changing. Slight climatic or other variations in the physical habitat may give one plant species a competitive advantage over the others. Moreover, plants tend to consume the soil materials upon which they are dependent. A species of tree that requires an alkaline condition of the soil may, for example, in time use up the alkaline substances and leave the soil so acid that that species of tree can no longer survive in the region. That species then becomes displaced by other plants, perhaps other trees, that can survive under these new soil conditions. In any region, the plant population is continually changing; and as the plant population changes, so too will the animals that live on plants.

In nature, *i.e.*, where men do not intervene, changes in the natural ecology are ordinarily slow and orderly. A forest of pines may gradually give way to one of oaks and other hardwoods, or trees may gradually encroach upon the grasses of a meadow. For a few seasons deer and elk may increase in number, the shrubs on which they live become stunted and depleted, the numbers of deer and elk then decline, and the shrubs return to normal once again. Occasionally, however, the natural ecology of a region is suddenly and markedly upset by the appearance of a new species or a more virulent form of an old species. Migrating birds may introduce the seeds of a grass new to a meadow; and if the natural conditions happen to be favorable, the new grass may thrive, displacing or at least reducing the numbers of some less hardy grass. An ecological change in the highlands may deprive cougars of their normal food supply and drive them down into the lowlands to seek prey, with the result that the ecology of the lowlands is abruptly disrupted. Any such change in the ecology of an area is of particular concern to men, for it may disturb the balance men have created in their own self-interest.

Culture and the Artificial Balance.—By interfering with the normal operations of the ecological processes, men establish and endeavor to

maintain an artificial balance of species and numbers in the region that they occupy. They clear forest lands, for example, and plant grains where none grew before. They plant orchards in the treeless plain. They kill off the bison and graze cattle where the bison lived. In these and many other ways men may within limits determine what plants and animals shall live in each area.

The character of a particular artificial balance depends in part upon the natural potentialities of the region and in part upon the culture of the people who live there. The net social product of the artificial balance—the food, fibers, and other organic materials useful to men—in turn determines how many people can be supported by the region and how free they are from famine, epidemic diseases, and other biological disasters. The cultural skills, tools, and knowledges by which different peoples have established artificial balances in their biological habitats differ as widely as do the biological characteristics of various regions of the earth. In general, the more complex the modes of cultural control, the less important to the inhabitants are the natural biological potentialities of the region. To the aborigines of California, for example, clams, squirrels, and acorns were the staff of life. To contemporary Californians the native plants and animals are of little significance. Only the forests constitute a natural biological resource. Modern techniques make it possible for contemporary Californians to produce in great quantities such “foreign” plants and animals as oranges, wheat, cotton, pigs, cattle, and chickens. As a result, the biological habitat of contemporary Californians bears but slight resemblance to the biological habitat of the aborigines.

PREAGRICULTURAL SOCIETIES

Preagricultural peoples, those who live by hunting, by fishing, or by grubbing edible roots, collecting berries and nuts, etc., differ from the lower animals only in their greater skill, their use of tools, and their collective enterprise. Such peoples live very close to nature and are directly dependent for their livelihood upon the natural balance of plants and animals. Except that their cultural devices give them an unfair advantage over nonhuman competitors, they are participants in rather than controllers of the natural ecological processes. Their dominance over their biological habitat is limited to their securing a more-than-normal proportion of the edible plants and animals naturally provided by the region.

Predatory Techniques.—Many peoples have been, and some still are, dependent wholly or to a very great degree upon the natural supply of game and edible plants. Those who live mainly, if not exclusively, upon roots, berries, acorns, and other vegetables have what is known as a

"collection culture." Characterized by lack of weapons and other tools useful in securing a livelihood, this sort of culture is generally considered to represent the lowest level of the arts. Considerably more advanced are the techniques, including the use of man-made tools and organized endeavor, of those peoples who live by catching fish or game. Some of the American Indians, notably those of California, lived by collection methods. Most, however, lived by predatory techniques, even as do the South American and African natives and the Eskimos of today.

Predatory techniques have varied widely in character and efficiency. The North American Indians generally hunted with bow and stone-tipped arrow; most South American natives depended upon blowgun and poisoned shaft; and the Australian primitives killed their game with a crooked stick that they threw. The efficiency of the predatory techniques of various peoples has had considerable bearing on their numbers and their success as a social group. All preagricultural peoples, however, regardless of the character of their biological habitat and their skill as predators, have had little control over their biological habitats.

The Life of the Savage.—Without exception, the life of preagricultural peoples has been impoverished, insecure, and harsh. A few of the Polynesian and Melanesian primitives did achieve an approach to the idyllic existence of the mythological happy savage. Their techniques were not, however, exclusively predatory; agriculture was fairly well developed, and fishing was more a supplement to than the basis of their economy. Most primitives have been preagricultural and for this reason, if no other, have had anything but an idyllic existence. Their entire life has revolved around the unceasing search for food; their religion, art, mythology, language, and even their social organization have been conditioned by the eternal search for fish or game.

Preagricultural peoples compete for their food supply directly, if not on terms of equality, with the lower animals. The fish that they catch, the rabbits that they snare, and the deer that they shoot are the fish that a larger fish did not catch, the rabbits that the fox missed, and the deer that got away from the wolf. Because they depend upon what they can catch out of what nature makes available, a preagricultural people are always few in number; they form small village, tribal, or other closely knit and sharply delimited groupings. Should their skills in the hunt so improve that they become able to increase their numbers and secure the lion's share of the available food, they immediately begin to eat themselves into impoverishment. For while their own numbers may increase, the too successful predators tend to destroy the animals that bear the young upon which they live. The perfection of predatory techniques is therefore likely to boomerang. When primitive hunters

became equipped with guns, they depleted the game that their bow-and-arrow fathers had harvested.

Because preagricultural peoples are directly dependent upon the luck of the chase and the benevolence of nature, their life is invariably precarious, alternately feast and famine, good luck and bad. If the arrow misses, the tribe may go hungry that day; if migrating game take a different route, the group may fail to get its winter supply of buffalo or deer or other meat. Any change in the natural ecology of the region they inhabit and to which they have made their adjustment will immediately and directly affect their welfare. If the rains fail and the grasses burn out, the supply of game will diminish; and the hunters will have to go far afield in search of substitutes. If disease attacks the fish or game upon which they live, the members of the group may have no alternative but to die themselves.

Because they are characteristically migratory, preagricultural peoples tend to remain primitive. Most game moves with the seasons, and those who live on game must ordinarily move with the game. Many fishing peoples, such as the coastal Indians of the Pacific Northwest and some of the Eskimos, have been able to remain settled in seaside villages; but almost all hunting peoples and some fishing peoples have had to lead a highly migratory life. And those who move about are precluded from developing and utilizing all those accouterments, such as permanent habitations, that minister to man's physical comfort and form the material basis of any civilization.

AGRICULTURAL SOCIETIES

When and where men first began to shape rather than just exploit their biological habitat is unknown.¹ The Neolithic peoples of Europe (about 10,000 to 3000 B.C.) are supposed to have cultivated some of the grains and fruit trees and to have domesticated some animals. The evolution of agricultural techniques during the historical period can be sketchily inferred from the physical remains of the various civilizations of the Mediterranean. By the time of the Romans agricultural techniques were as fully developed both in Europe and in Asia as they were to be until well toward the close of the Middle Ages, when a new period of development began.

Cultivation of Plants and Animals.—Although agricultural techniques vary greatly, the basic procedure is the domestication and cultivation of

¹ See N. S. Gras, *A History of Agriculture* (Harper, New York, 1925). See also the series of articles by C. Wissler, *et al.*, under the title "Agriculture" (*Encycl. Soc. Sci.*, vol. 1, pp. 572-600). These articles cover the known history of agricultural technology and indicate some of the more important relations between that technology and the other aspects of social life.

those plants and animals that men have found most useful to them. A desired plant is planted or a desired animal bred, it is provided with some nourishment during its period of growth, and it is protected from competitive or parasitic plants and animals. The ecological relationship between man and a domesticated and cultivated plant or animal is symbiotic rather than conflicting; man brings into being what he subsequently consumes.

The cultivation of plants and animals is the simplest and most widespread mode of direct control over the biological habitat. The advantages of cultivation are enormous and now seem evident, although some of the peoples of the world have still to discover them. In the first place, cultivation permits the biological potentialities of an area to be put to specialized use. Whereas natural grasslands will produce few heads of edible grain, a field planted to wheat, oats, rye, or some other grain will produce mainly the grain that was planted. With animals a similar economy accrues, although in a different way. Few of the wild animals living within a particular area will be caught by the hunter; many will be killed by nonhuman predators, many will die of accident or starvation, and many will wander afield. But all the cattle or sheep grazed on an area will be available to the herdsman; he will not be dependent upon the luck of the chase.

Selective Breeding.—A further advantage of cultivation is that the characteristics of useful plants and animals can be improved and in time always have been. Through selective breeding, the selection of the best strains or sports, or through crossbreeding, men have shaped their plants and animals to suit their own interests and convenience. Domesticated animals have in the course of time been made to yield more meat, hide, and fat per animal and per unit of care and cultivated plants to yield more edible seed, fruit, or fiber per plant and per unit of land. Wild grasses, for example, take about the same room, soil food, and moisture per plant as do the vastly more productive domesticated grains that have been developed from them. Few of man's useful plants and none of his animals are as nature provided them. The "original" horse, long since extinct, was a puny beast; "natural" cattle gave little milk and still less meat; and the wild pig was mostly hair and hide and bones.

Just how deliberate the selective breeding of plants and animals was in early times is not known; it is probable that the process was more or less inadvertent. The primitive farmer may have saved his biggest grains for seed because they seemed most likely to germinate, and the primitive herdsman may have killed his weaklings for food and saved the stronger ones for breeding simply because the weaklings were not worth the tending. At any event, men began early to improve those plants

and animals that they cultivated; and in this way they constantly, if very slowly, increased the productivity of the area in which they lived.

Today, selective breeding has become a deliberate and exceedingly fruitful procedure, based upon scientific knowledge of the genetic processes. Animals and plants are now "tailored" to specifications. Grains, fruits, and meat animals are designed for special purposes; and those designs reflect the special needs of contemporary societies. The growing use of vegetable oils, for example, has led to the development of varieties of corn that yield a high proportion of oil; the urban demand for fresh fruits has resulted in the development of varieties of fruits that stand storage and shipment; the declining size of the American family has led to a redesigning of meat cattle, so that they cut advantageously into small pieces (large families can use roasts, but small families prefer steaks and chops).

Agriculture and Social Life.—A society that lives by agricultural techniques is somewhat, although never entirely, removed from dependence upon natural forces. It is less subject than a society that lives by predatory techniques to the whims and fancies of nature, less likely to suffer disaster as a consequence of some minor climatic deviation or some biological invasion of its biological habitat. Moreover, since cultivation of plants and animals results in a higher production of the things men want from a given region, agricultural societies can be considerably larger, area for area, than can predatory ones. Furthermore, since the struggle for mere existence is somewhat less intense, the social life of agricultural peoples becomes somewhat less a means to an end—to securing food—and more an end in itself, with the result that the culture may be elaborated and enriched in a variety of ways.

A distinction must be drawn, however, between herding peoples, those who have cultivated only animals and usually just one kind, such as horses or cows, and truly agricultural peoples, those who have cultivated both plants and animals. Herding peoples, like predatory peoples, are characteristically tribal and migratory. Animals are at best inefficient converters of plants into human food, be it meat or milk. The number of people who can live in a given region on meat and milk is therefore much smaller than the number who could live in that same region, assuming it to be cultivatable, on plants or a combination of plants and animals. And since they depend upon natural grasses for animal feed, herding peoples have generally had to follow the grass with the changing seasons.

The cultivation of plants as a means of securing directly and by way of domesticated animals the desired food, fibers, and other materials permits the maintenance of a comparatively large and settled population. Large numbers and settled abodes seem, in turn, to have been pre-

requisite to the development of complex and diversified cultures. Many agricultural peoples have remained primitive; but only those peoples who have developed agricultural controls over their biological habitats have developed civilized modes of life.

The Agricultural Revolution and Industrial Society.—Modern Western societies, like the ancient civilizations of Egypt, Greece, Rome, China, Mexico, and Peru, depend on agriculture for their organic materials. In all modern societies, however, industry is the economic motif, and agriculture has become a stepchild of industry. Less than half of modern peoples are directly concerned with agricultural production; more than half are urban and industrial and live on the surplus of plant and animal materials that are produced by the rural minority. Probably for the first time in human history, the securing of the basic necessities of life has become of secondary concern to men.

This subordination of agriculture to industry has been made possible by three interrelated developments that have occurred during the past few hundred years. First in point of time has been the application of the well-developed agricultural techniques of Europe to areas of the earth that had previously been occupied by peoples of predatory or simple agricultural techniques. Two centuries ago, for example, a good deal of North America was an aboriginal hunting preserve, whereas today much of it is field, orchard, and pasture. The diffusion of European agricultural techniques has already greatly increased world production of food and other organic materials, and there are still vast areas to be brought under cultivation. Second in point of time, but even more important in terms of social consequences, has been the growing mechanization of agricultural procedures. A consequence of the industrial revolution, the mechanization of agriculture has nonetheless been essential to that revolution; for by mechanization men were released from the land to work in factory and shop. Third, and with potentialities still unfathomable, has been the recently begun application of scientific knowledge to the selective breeding and cultivation of plants and animals. At the same time developments in the field of biochemistry have begun to provide from both organic and inorganic materials substitutes for many costly agricultural products, such as silk, rubber, and quinine, and for such nutritional substances as vitamins and the amino acids. Thus, even as more and more land is being brought under cultivation and the productivity of land is being greatly increased, a growing number of productive processes are being transferred from field to factory.

Some of the effects of the rapid historical extension and improvement of agricultural techniques will be considered in later chapters. Together the extension and improvement constitute an agricultural revolution, still in process, that has been freeing men from direct and constant depend-

ence on their biological habitats. Although this freedom is only relative to their greater dependence in times past, it has given men the time and the opportunity to devise and build the many structures, physical and social, that are characteristic of modern life.

SCIENCE AND BIOLOGICAL CONTROL

The protecting of selected plants and animals from competitors and predators is a vital part of the process of achieving and maintaining an artificial balance in the biological habitat. Agricultural peoples have long known how to defend their plants and animals from the more visible and obvious competitors and predators—weeds, wolves, etc. But until recently, even the best of the world's agriculturalists were more or less helpless in the struggle to control rodents and insects and were entirely incapable of defending their crops and their herds against rusts, mildew, viruses, and bacteria. Moreover, they had few defenses, other than salting and smoking, against those organisms that invaded their food supply between the time of harvest and the next productive season, and just as few—in many instances none at all—against the innumerable organisms that might attack their own bodies.

Famine and Plague.—Many famines and all plagues are the consequence of the invasion of an area by foreign organisms or of the rise in virulence of some indigenous one. Famine and plague have played a large role in social history, leveling populations, bringing wars to a dreary end, setting off large-scale migrations, and otherwise disturbing the social *status quo*.¹ The so-called "Black Death," the plague that swept into western Europe toward the middle of the fourteenth century, reduced the population of some areas by perhaps as much as one-half and had many other social repercussions. For one thing, the death rate was higher among the laboring than the other classes; and for years thereafter there was an acute shortage of laborers, a condition that is believed to have been an important factor in the subsequent rise in the economic and political status of the laboring classes in England. Typhus was the final calamity that broke the power and the legend of Napoleon's Grand Army and ended what has so far been the most successful of the attempts to unite the peoples of western Europe. A blight that attacked the potato

¹ For descriptions of some of the more disastrous epidemics of history and discussions of the various relationships between disease and society, see G. G. Coulton, *The Black Death* (Allen & Unwin, London, 1926); C. A. Gill, "Epidemics" (*Encycl. Soc. Sci.*, vol. 5, pp. 569-572); C. A. Gill, *The Genesis of Epidemics and the Natural History of Disease* (Macmillan, New York, 1928); A. E. Levett, "Black Death" (*Encycl. Soc. Sci.*, vol. 2, pp. 574-576); H. E. Sigerist, *Civilization and Disease* (Cornell University Press, Ithaca, 1943); and H. Zinsser, *Rats, Lice and History* (Little, Boston, 1935).

crop upon which the mass of the Irish people were dependent for sustenance sent the first great wave of Irish immigrants to the United States.¹

While it may be doubted that diseases and plagues have ever been a major factor in the rise or decline of civilizations, they have certainly been of far greater significance to societies than have natural catastrophes. And until the growth of scientific knowledge provided some understanding of the laws of organic life and the existence of microorganisms and thereby made possible the development of techniques for defending plants, animals, and men from diseases, famine and plague were as inevitable and unavoidable as were earthquakes, tidal waves, droughts, floods, and other natural catastrophes.

Science and Sanitation.—Of the many accomplishments of science none is more socially significant than the provision of defensive measures against the microorganisms that attack the human body. For many centuries the Chinese had boiled their drinking water, not knowing why, as a defense against water-borne diseases. This boiling of drinking water was probably the most advanced sanitary measure in use until a few hundred years ago. Although the Romans had recognized the importance of an uncontaminated water supply and adequate sewage disposal, Roman sanitary techniques had been lost; and the sanitary techniques of medieval Europe were hardly better than those of prehistoric cave men.² Gradually the sanitary arts of the Romans were rediscovered, and the frequency of disastrous water-borne epidemics diminished. A century ago men were, however, still without any defenses against the many diseases transmitted to themselves by lice, fleas, mosquitoes, and flies or against the diseases that attacked their crops and animals. It was the development of the science of biology that, about the middle of the last century, began to extend men's control of their biological habitats to include measures against insects and microorganisms.³

Of all the new biological control techniques heat sterilization, used in most forms of food preservation, has so far been the one most fraught with social consequences. Because of it, populations can now be supplied with a well-balanced diet throughout the year, large urban populations can be supplied with sufficient food, and the various peoples of the world can draw upon the entire world for their food supplies. Heat sterilization has also made possible the development of aseptic surgery and has per-

¹ For an analysis of the social consequences of large-scale famine, see F. A. Southard, Jr., "Famine" (*Encycl. Soc. Sci.*, vol. 6, pp. 85-89).

² For descriptions of the unsanitary practices of the peoples of antiquity and of the Middle Ages, see T. H. Reed's article, "Sanitation" (*Encycl. Soc. Sci.*, vol. 13, pp. 538-542).

³ See F. S. Taylor, *The Conquest of Bacteria* (Philosophical Library, New York, 1942).

mitted milk to become an important item in the diet of most Western peoples without at the same time becoming a major carrier of such diseases as typhoid, tuberculosis, and undulant fever. Almost as revolutionary in its consequences has been the development of techniques of poisoning unwanted organisms. Today crops can be protected from birds, rodents, snails, slugs, worms, aphids, mildews, etc.; domesticated animals can be protected from ticks and other disease-transporting insects; and men can be protected from lice, fleas, mosquitoes, flies, and other disease-bearing creatures.

The development of techniques for injecting substances poisonous to disease organisms into the blood stream to aid the human body in its fight against those organisms has brought many diseases of man under control. Against diseases that are transmitted by contact, effective techniques of quarantine have been developed. Other diseases of man and his animals have yielded to the technique of immunization, a procedure by which the normal defenses of the body are artificially mobilized prior to exposure to the disease itself. Less than a century ago smallpox, for example, was practically universal with Western peoples; there was hardly a face that did not bear the disfiguring scars of this disease. Today, fairly widespread if still inadequate use of vaccination has made this particular disease a rarity.

It must not be supposed, however, that the new science-based techniques have given men final domination over the lower organisms. The use of poisons to destroy plant and animal pests is limited by the fact that most such poisons (including the much-publicized DDT) will harm men as well as pests, that some pests develop an immunity to a poison, and that as one pest is killed off another rises to take its place. Sterilization by heat or by chemical means is effective where it can be employed; but it is of course impossible for men to sterilize their entire environment. So far little headway has been made against the virus diseases; the common cold, for example, is as common as ever. Bacteriologists suspect, moreover, that new diseases, or new forms of old diseases, make their appearance almost as rapidly as means of defense against old diseases are discovered.¹

¹ Moreover, not all recent technological developments have contributed to improved health. Some have had definitely adverse, if temporary, consequences. The household plumbing of the last century, for example, was mainly lead pipe. It is now known that lead is one of the most insidious of cumulative poisons. Food preservation techniques, so vital to the growth of the modern city, have often had adverse consequences to public health. The characteristic malnutrition of the poorer classes of our Southern states is, for example, in part a consequence of the fact that they now use corn that is commercially milled—a process that renders the corn stable and prevents it from deteriorating but destroys essential food substances that are retained in the old-fashioned method of milling.

SOCIAL ORGANIZATION AND THE BIOLOGICAL HABITAT

The new science-based techniques of biological control have played a significant role in the development of new modes of social organization; conversely, changing modes of social life have posed a variety of new control problems. The growth of cities, already mentioned, gave rise to a whole complex of new conditions of life, both human and subhuman. And as the city way of life developed, there occurred a decline of prior forms of social isolation, a tremendous rise in the mobility of persons, and the consequent mixing of the peoples of the world and their various diseases.

Social Isolation as Quarantine.—Prior to the modern era, the peoples of the world lived for the most part in comparatively small and characteristically isolated social groups. Their isolation helped to prevent the spread of diseases from group to group, even as it limited the diffusion of cultural elements. The outbreak of one of the epidemic diseases that is transmitted by man himself or by insects or rodents could run through a local population without much likelihood of its spreading to near-by peoples. Plagues and even the plant and animal diseases that brought famine tended to be local rather than general phenomena. The circumstances that set the peoples of early medieval Europe into motion, breaking their feudal isolation and beginning those cultural developments that have culminated in modern societies, also destroyed organizational barriers to diseases. As the diseases of men were spread from locality to locality, many were blended and cross-blended to produce what were in effect new kinds of diseases.

The quarantining effect of social isolation is clear: diseases that are spread from hand to mouth, by body lice, or through sexual intercourse, for example, cannot spread beyond the boundaries of a closed social group. And although the biological processes by which new diseases or more virulent forms of old diseases develop are unknown, it is evident that social isolation discourages the rise of epidemic diseases, as well as their spread, whereas social mobility increases their incidence and, at times, their virulence. With the gradual decline of social isolation and hence of automatic quarantine, disastrous regional, continental, and world-wide epidemics began to appear.

The most spectacular of these diseases were the previously mentioned Black Death, which affected the peoples of Asia as well as those of Europe, and the Spanish pox—syphilis—which appeared in epidemic form in Europe during the early sixteenth century. The latter, a more virulent form of the disease than any known today, was apparently a product of the cross-blending of old strains, either of those indigenous to the various peoples of Europe or of an endemic European strain and one brought to

Europe from America. The most widespread epidemic of recent times was the virulent influenza of 1918, which affected most of the peoples of the world. Meanwhile, however, many formerly endemic diseases had made one or more epidemic appearances; and others, such as tuberculosis, which killed far more American Indians than did the guns brought by European settlers, had spread slowly throughout much of the world.

As the diseases of the various peoples of the world have been spread about the world, so too have their domesticated plants and animals and, along with these, a multitude of pests. The result has frequently been an upsetting of the ecology of a region and the appearance of new problems of control. Thus the importation to America of the English sparrow, the Japanese beetle, the French snail, the Argentine ant, and many other plant pests has complicated the control problems of farmers, gardeners, and householders. The introduction of the rabbit to Australia completely changed the ecology of that island continent; the rabbit, a prized domesticated animal in Europe, soon became the worst enemy of the Australian farmer.

Air Transport and the Biological Habitat.—A new set of disease-control problems has arisen with the development of air transport. The life span of some disease-carrying insects is not long enough for them to survive crossing an ocean by ship or a continent by train or automobile. This fact has helped prevent the universalization of such insects as the anopheles mosquito, the carrier of malaria. Most insects can, however, survive the short transoceanic or transcontinental journey by air; and only by systematic inspection and decontamination of planes traveling from region to region can the spread throughout the world of the anopheles and other dangerous insects now be prevented. Fortunately, the development of cheap and effective sprays makes this control possible.¹ It remains to be seen, however, whether the nations of the world can establish the laws and agencies necessary for putting such control into effect.

SOCIAL ORGANIZATION AND THE MAINTENANCE OF AN ARTIFICIAL BALANCE

Social Sentiments and Sanitation.—From the beginning of the modern era until close to one hundred years ago, the problems of biological control that were arising as a consequence of changing modes of life were generally ignored. Men prayed or burned fragrant wood to check plague, they followed some folk ritual to prevent rust from destroying their fields of wheat, they closed their windows against the deadly night

¹ For a description of some of the quarantine techniques used during the recent war to protect the American people from invasion by tropical diseases, see the popular article "Can We Stop an Invasion by Disease?" (*Sat. Eve. Post*, Dec. 1, 1945, p. 27) by J. S. Simmons, who had charge of this work for the American Army.

air, and they went right on getting epidemic diseases and losing their crops and their herds.¹ During the last 100 years developments in control techniques have caught up and kept pace with the problems of biological control. Application of these techniques, however, has proved to be much more difficult; for in most instances effective application would require large-scale forms of collective enterprise that would violate traditional sentiments and run counter to established modes of social organization.

The individual farmer can dust his cabbages, spray his orchard, poison the rats in his barn, plant rust-resistant wheat, or move the family out-house away from the family well without in any way modifying his views and practices regarding family life, the ownership of land and home, or state's rights. Without loss of valued personal freedom of action he may also put up screens to keep out flies and mosquitoes, poison the cockroaches in his kitchen, and have himself and his wife and children inoculated against smallpox. But the provision of safe water, milk, and other foods for an entire city population, the elimination of insect breeding grounds, the prevention of rat-borne plague, etc., are collective problems that cannot be settled by individual applications of the new control techniques.

Animals, insects, and microorganisms are indifferent to the distinctions that men draw among themselves. They are in the fullest sense democratic, ignoring national and other political jurisdictions, refusing to recognize racial, class, and other differences between men, and utterly disregarding the rights of private property and the sanctity of the home. Since collective attack on control problems has often run counter to established modes of organization, effective application of new biological-control techniques has often had to wait upon the slow modification of old forms of social organization; and in many instances men have preferred to suffer disease rather than to relinquish cherished social sentiments and prerogatives.

Familism.—Many of the beliefs, sentiments, and practices that have survived the old family system of organization have operated to deter application of available control techniques. Acceptance of the idea that public health officials had reason and right to quarantine a family unit in order to check the spread of a contagious disease was long delayed and has only recently gained social as well as legal support in many Western nations. Until it was quite generally recognized that sickness

¹For a description of prescientific, mid-nineteenth-century medical practices in America, see M. E. Pickard and R. C. Buley, *The Midwest Pioneer, His Ills, Cures and Doctors* (Banta, Menasha, 1945). See also W. F. Norwood, *Medical Education in the United States before the Civil War* (University of Pennsylvania Press, Philadelphia, 1944); and B. J. Stern, *American Medical Practice in the Perspective of a Century* (Commonwealth Fund, New York, 1944).

was not an act of God and a personal misfortune but a consequence of contagion and a threat to the entire community, quarantine laws were well-nigh unenforceable. Nor was there any general application of the simple technique by which congenital gonorrheal blindness is prevented. Even today old beliefs and sentiments and public failure to understand the nature of smallpox prevent enactment of legislation in the United States and many other nations (Germany is a striking exception) to make vaccination against smallpox compulsory. In the case of smallpox and some other diseases, resistance was mobilized and expressed in superstitious terms; thus in America smallpox vaccine was for long derisively labeled "cow pus" by the various antivaccination societies that successfully fought against compulsory inoculation, and a mythology of terror grew up around the use of the vaccine. Few contemporary Americans have any superstitious dread of smallpox vaccine, but many parents still cling to the view that they have an inalienable right to decide what is good for their children's health.

Sacred family rights have also been invoked to prevent the application of many other modern disease-control techniques. Pasteurization of milk, made necessary by the growth of cities, by the increased use of milk as a food, and by the consequent commercialization of the milk supply, was vigorously resisted for twenty years and more here in the United States. Restrictions on the distribution of raw milk were deemed a violation of the right of each householder to buy milk where and how he pleased. Sex taboos surrounding monogamy have until very recently prevented any attempt to deal directly with venereal diseases as public health problems. Brothels might be closed by the police on grounds of public morals; but up to the time of the First World War, when the building of a civilian army somewhat sharpened the venereal disease problem, the closing of a brothel for reason of public health was unheard of. The fact that the venereal diseases are traditionally associated with illicit sex relations subsequently made attempts to establish health requirements for entrance into marriage seem to be a legal slur on the moral character of the prospective bride and groom and a violation of the marital relationship—which in this instance meant the right of an infected man or woman to infect his spouse and transmit the disease to his offspring.¹

Slowly, laboriously, and against constant resistance, public health officials have invaded the family and transgressed old parental and individual rights; and thus they have gradually brought some of the scientific knowledge about the control of organic life to bear upon problems

¹ See H. J. Locke, "Changing Attitudes toward Venereal Diseases" (*Amer. Sociol. Rev.*, vol. 4, pp. 836-843, 1939).

of collective welfare.¹ Nonetheless, the priority of the health interests of the larger society over the sentiments and "rights" of the individual has not yet been fully granted. And only among Western peoples has any significant application of the new techniques so far been made. The masses of India and of China, the primitives of Africa, and the natives of South America have not even been given an opportunity to resist attempts to apply these techniques to them. They and many other peoples still live in a world of evil spells, evil spirits, and magic rituals, completely indifferent to the flies, fleas, rats, and microorganisms.²

Private Property.—Contemporary Western property rights are based upon ideas and practices that evolved long before it became known that water can carry typhoid, that mosquitoes transmit malaria and yellow fever, and that rats carry fleas that transmit bubonic plague, etc. Those ideas and practices for long precluded the application of some control techniques, and even today they frequently stand in the way of full utilization of these techniques. In the old rural system of life, for example, every family had a "right" to its own well, its own outhouse, and its own pigs and chickens. Adherence to this right resulted in early towns and cities that were unsanitary aggregations of farm-type domestic establishments. As the towns and cities grew larger and more congested, contagious diseases became commonplace rather than exceptional. Yet the countryman-become-townsmen was exceedingly slow to relinquish his right to his own well and his own outhouse; he for long resisted, often to his own untimely death, such sanitary measures as public water-supply and drainage systems and the correction of household conditions, hen-coops, pigsties, garbage buckets, etc., that provided food and breeding places for rats, mosquitoes, and flies. Today most Americans accept without question the desirability of public control of such matters. Even so, there is little direct public pressure for public health works; and the people of many of America's proudest cities drink sewage-polluted water that can be kept reasonably safe only through heroic quantities of chlorine. Most Europeans rightly believe their tap water to be unpotable, and most of the rest of the people of the world still draw their water along with countless microorganisms from the family or town well or go down to the river to dip it up.

One of the more striking ways in which old ideas of property rights have hindered public health measures is the commercialized production

¹ An excellent summary of the historical growth of public sanitation practices is contained in C. Winslow's article, "Public Health" (*Encycl. Soc. Sci.*, vol. 12, pp. 646-657).

² An interesting description of the kind of resistance that a primitive people can put up against the efforts to apply modern techniques to their health problems is to be found in J. Useem, "American Military Government in Micronesia" (*Amer. J. Sociol.*, vol. 51, pp. 93-102, 1945).

and distribution of various chemicals and medicines. Until the outbreak of the Second World War, for example, a Dutch cartel held a virtual monopoly on the production of quinine, used both as a preventive and cure for malaria. This cartel held the price of the drug at about six hundred times the cost of production, with the result that its use was denied to most malaria victims. No one seems to have considered that in exercising its economic "rights" this cartel was directly contributing to the suffering of millions and the death of tens of thousands, although had any member of the cartel shot and killed a single human being, he would have been judged a murderer.

Unsocialized Medicine.—The growth of public health agencies and the gradual application by them of the new biological control techniques have been important factors in the social history of the past half century. Some of the worst of the epidemic diseases have been all but eliminated in Western countries; the health level of cities has risen until it is almost as safe to live in a modern city as on a modern farm. Where applied, public health measures have tended to affect the health of all classes of the population. But in the treatment, as distinct from the prevention, of disease no such general application has yet been achieved in any country. The sick individual purchases medical services as he does legal advice, bread, and automobiles. The professionalization of medicine has somewhat tempered the commercial nature of the relation between physician and patient and has made available to the indigent sick of our cities free treatment in clinics and publicly supported hospitals. Nevertheless it is generally true that the upper economic classes can and do secure more and much better medical service than do the lower economic groups, that the urban well to do secure a disproportionate share of medical service, and that a very large part of the American people are unaffected by the developments in medical science. For them, the magic of witchcraft has simply been replaced by the magic of the corner drugstore.

So far as it has gone, public health endeavor has been concerned with contagious diseases. In this endeavor public health officials have been able to secure the support of business and other leaders, for it finally became evident to the upper classes that it was to their own interests to prevent the spread of epidemic diseases—that the flies in the rich man's home came from the poor man's garbage and that when a plague broke out in the slums even the best people were not immune. Upper-class interest in the health of the masses does not so clearly extend to the prevention and cure of noncontagious diseases. If a poor man is infected with hookworm, that is his own affair; the well to do will not catch it, for they sensibly wear shoes.

In the long run the physical welfare of the masses does affect the economic and other interests of the upper classes, and this fact is now

gradually becoming recognized. The sick worker is a poor and unreliable worker. If the health level of the working classes is low, the productivity of labor is less than it otherwise would be; and in the end the employer must pay more for a given amount of work. An inefficient laboring class is in many respects an economic liability to the upper class; the upper class must not only pay more for its goods, but support via charity or taxes the wives and children whom the sick workers cannot support, etc. Moreover, the physically incompetent poor encumber the more healthy and prosperous segments of society in other than economic ways. In times of war particularly, the favored classes pay heavily for physical unfitness among the masses; every poor boy who is rejected for military service because of physical disability increases the military responsibilities of those who are in good health.

As the middle and upper classes of contemporary societies have come to recognize the importance to them of the level of health of the lower classes, sporadic attempts have been made to develop means by which the mass of the people could be provided with scientific medical care. In England and in some of the countries of western Europe large-scale experiments in socialized medicine have been undertaken, with results that are still inconclusive. In the United States socialized medicine has been approached with considerable misgiving.¹ So far the greatest success has been achieved with various forms of semicommercial, group health-insurance programs, valuable to the business and professional classes but generally beyond the means of the laboring classes. Although some groups within the medical profession are in favor of one or another of the proposals for the socialization of medicine, the profession as a whole is resistant and offers some very practical reasons for fearing political organization and control of medicine. The people for whom socialized medicine is intended have done little to further the program. Some of the labor unions have established medical aid or insurance funds; but by and large those who most need help in securing scientific medical care are disinterested in that type of care. They have a marked preference for old folk remedies, modern bottled nostrums, and medical quacks.

Jurisdictional Limitations.—Present political units, such as our own state, county, city, and township divisions, came into being to meet the economic, religious, and social circumstances of a century or two ago and have not changed with the passage of time and the modification of those circumstances. These political divisions are, as was mentioned

¹For discussion, pro and con, of socialized medicine, see B. N. Armstrong, *The Health Insurance Doctor* (Princeton University Press, Princeton, 1939); M. E. Davis, *Industrial Life Insurance in the United States* (McGraw-Hill, New York, 1944); M. M. Davis, *America Organizes Medicine* (Harper, New York, 1941); F. Goldmann, *Public Medical Care: Principles and Problems* (Columbia University Press, New York, 1945).

earlier, totally unrelated to the biological habitat and quite inimical to effective control of it. One side of a river, swamp, field, or lake may fall within the jurisdiction of one nation, state, or county, the other side within the jurisdiction of a different political unit. Unless all the various political units within a given ecological region join in aggressive action against mosquitoes, flies, rats, or other disease carriers, the efforts of any one of them are futile. Here in the United States, for example, mosquito-abatement work has often been impossible because one of a number of counties—the usual units of such work—has refused to cooperate. Even more serious has been the failure of a number of municipalities strung along a river to cooperate in preserving the purity of the water that they jointly utilize. It is still common practice for each such city, in accordance with its traditional political rights, to draw its domestic water from upstream and dump its sewage downstream, with the result that only the city situated nearest the headwaters secures reasonably pure water for domestic use. Our county and city jurisdictions are slowly being subordinated to state and Federal control of public health matters. In Europe, however, joint large-scale attack on problems of public health is made almost impossible by the fact that national boundaries bisect ecological regions; and nations are much more inclined to make war upon one another than to unite in a struggle against micro-organisms.

The irrelevance of traditional political jurisdictions to problems of public health is growing more rather than less significant. As the diseases and the plant and animal pests of the various regions of the world are becoming more and more universalized, unprecedented problems of biological control are arising. Thus many of the diseases that were a short while ago limited to tropical regions, and that were then considered to be diseases of tropical climates, are spreading into temperate regions; and the traditional diseases of the temperate zones are demonstrating an equal ability to thrive in the tropics. To check the continual spread of pests, bacteria, and viruses each nation or other political unit can of itself do little. Control of the biological habitat is becoming more and more a world rather than a local problem. Ultimately, therefore, the ability of man to maintain his dominant position in the biological world rests upon his ability to organize himself on world-wide levels.

War and the Biological Habitat.—Whenever the inhabitants of a region are distracted by other concerns from the struggle to maintain a social balance within the biological habitat, that habitat immediately begins to return to nature. As the householder distraught by marital discord may let his lawn and flower beds run wild, so the society disrupted by internal dissensions or preoccupied with warfare may neglect its fields and herds and let nature have its way with them. In the past the failure of a society

to maintain cultural controls over its habitat has led mainly to a decline in its food production. When societies of today, dependent as they are upon the application of many and varied control techniques, relax their vigilance, the consequences are much more complex.

Every war and every revolution of recent times has been accompanied by, or at the very least followed by, a sharp fall in agricultural production and a marked rise in plant, animal, and human diseases. During the course of bitter strife, civil or international, agricultural practices deteriorate; for farm labor is scarce, machinery is irreplaceable, and many fertilizers and insecticides are unobtainable. Where conditions are critical, as they were in most of the countries of Europe during and immediately following the latest war, many fields actually return to nature. Elsewhere the tendency may be, as it was in the United States during the same period, to "mine" the soil and let the future take care of the growing population of weeds, pests, and plant diseases. The controls normally exercised by modern societies over their biological habitats are so complex and so interdependent that even the slightest failure to maintain those controls may have marked cumulative consequences. In the United States, for example, the deer, elk, and duck populations increased tremendously during the war years simply because most hunters were out after other game and the remainder could not obtain the shells and gasoline needed to go hunting. The crop damage traceable to these animals, significant even under peacetime controls, rose enormously.

An even more serious result of war is the characteristic rise in the incidence of contagious diseases and of epidemics. Many factors combine to contribute to the increase of each of the several diseases. Venereal infections, for example, rise because of the increased mobility within the population incidental to the conduct of a war and the general relaxation of restraints upon promiscuous sexual intercourse. These factors in turn make for a rise in the number of prostitutes, professional and amateur, and an increase in their promiscuity; each prostitute services more men—business is always brisk during wartime—thus increasing the chances of her becoming infected and increasing the number whom she can in turn infect. During times of war infections transmitted by hand to mouth, such as colds, also increase, mainly because of greater personal mobility and decreasing ability to keep clean. The danger of water-borne diseases, such as typhoid, rises in war-congested centers and hurriedly constructed prison and other camps; and the danger becomes acute when public facilities are disrupted or destroyed by enemy attack. War is a dirty affair, in the literal as well as the figurative sense. War-torn peoples are disorganized and impoverished, and they have not the means, the time, or the inclination to keep themselves and their habitations clean or to take the measures that in normal times help to maintain

the necessary artificial balance. As a consequence, rats and lice flourish, and the danger of epidemics of such diseases as typhus and bubonic plague increases. In addition to all such factors is the fact that embattled peoples usually experience a sharp decline in their housing and clothing standards and become in time fatigued and undernourished and hence more susceptible to disease.

A century ago diseases traceable to the conditions incidental to war killed more fighting men than did bullets. Modern armies take infinite precautions against disease, using in the most effective ways (since they can be put into operation by fiat and are not dependent upon the whims and fancies of individual soldiers) the various modern control techniques. In fact, military application best demonstrates the potentialities of these techniques and the inadequacy of their application by peacetime social organization. Under the most adverse conditions, modern armies exercise such complete control over the biological habitat that modern fighting men seldom die of epidemic diseases. Similar measures are seldom possible, or at least are seldom taken, with the involved civilian populations.¹ As a consequence, plague as well as famine may still follow in the wake of war, as it once invariably did.

¹ An interesting and suggestive exception was the way in which the American Army checked an incipient epidemic of typhus among the civilian population of Naples. After the surrender of the city to American forces, every citizen was thoroughly deloused with DDT, whether he approved of the treatment or not. See *Time*, Nov. 8, 1943.



Chapter VII

CULTURE AND THE SOCIAL POPULATION

THE size, the sex and age composition, and the physical vigor of the social population, the members of a society, are intimately related to the culture. A few hundred people could not employ the complex and elaborate techniques and organization that are typical of large modern cities, nor could a million human beings survive by primitive techniques and live together in the modes of a primitive tribe. A group of people in which the proportion of the sexes is nearly equal could not to any extent adhere to a polygamous form of family life. Nor could a society of sickly, undernourished people long maintain a culture that imposed, as does modern Western culture, heavy demands upon their physical and mental energies.

The relationship between the culture and the social population is much like that between the culture and the biological habitat. Both are variables, differing from society to society, and each varying in accordance with the other. A change in the culture ordinarily affects the social population; and a change in the social population, such as a reduction in numbers and health that might be induced by famine and plague following a war, usually affects the character of the culture. In this relationship, as in that between culture and the biological habitat, the more complex and effective the culture, the more the culture affects the population and the less the population influences the culture. Among simple primitives, the population factor may preclude the development of new cultural devices. With modern societies the culture plays the major role, and the population plays the minor one.

The importance of the population factor, even to modern peoples, is, however, clearly evident. Through the development of cultural controls over the lower organisms man has become the dominant animal; and the greater his skill, the more assured is his position of dominance. But man is himself a creature of biology. Like all other organisms, he has great powers of reproduction; and when he does not exercise control over his own numbers, his position of dominance means only that he is more numerous than he otherwise would have been. Individually, he is no better off. Life is a perpetual struggle to survive, a constant competition and conflict among individuals and among groups of human beings for the necessities of life.

The Subsistence Population.—In the “natural” course of events, a human population increases in numbers until there is just sufficient food to go around. At this point natural checks, not unlike the ecological processes that hold down the numbers of trees, birds, aphids, etc., come into operation to keep the population from increasing further.¹ These natural checks are malnutrition, starvation, and disease. Continual malnutrition shortens life, lowers resistance to disease, probably reduces fecundity, and results in many still births and a high infant mortality. Starvation, usually periodic and the consequence of a temporary reduction of the food supply, reduces the human population in much the same way that a drought cuts down the number of plants that grow in a region and the number of animals that live on those plants.

A social group whose numbers are kept in check only by natural controls is a subsistence population—a population consisting of as many persons as can eke out a livelihood on the proceeds of their technology in the area that they inhabit. A subsistence population is in every sense poor; and any increase in its ability to produce the necessities of life is soon absorbed by a corresponding increase in its size, with the result that the population returns to impoverishment, and natural checks to further population growth again begin to operate.

Only when the members of a society control their own numbers, even as they control the weeds in their gardens and the wolves in their pastures, can they maintain for long a level of material welfare much above that of bare subsistence. In a very real sense, then, all the recent cultural developments that were discussed in the two preceding chapters would not have improved the lot of man had he not also begun to exercise an effective control over his own numbers.² Increasing the cattle on the plain or the cabbages in the field is no advantage to the farmer if he also increases to a like degree the number of children who sit down to his dinner table.

PREMODERN POPULATIONS

Most premodern populations were subsistence in character, for until very recently natural checks operated among men in the same way that they do among the lower animals. Whether the social group was a

¹ The fecundity—physiological capacity to reproduce—of man is comparatively low. The common female housefly has an estimated fecundity during its brief reproductive life of 6,000 *billion*, the dog of about 160, the human animal no more than 25. Nevertheless, were human fertility—the actual reproductive rate—to approach fecundity for just one generation, the 2 billion people now on the earth would approach 25 billion. Human fecundity is not, obviously, a factor limiting the size of social populations.

² For a more exhaustive discussion of this matter than is possible in the present chapter, see W. S. Thompson, *Population Problems* (3d ed., McGraw-Hill, New York, 1942); and the books and articles cited in Supplementary Bibliography 6.

primitive tribe that lived by hunting or fishing or one of the large agricultural populations, such as those of the ancient civilizations, the pressure of numbers tended to keep the level of living close to the point where any further reduction in food supply and physical comforts would mean malnutrition, starvation, and premature death. Under such conditions, the major advantage of improvements in the technology or organization, such as more efficient methods of cultivating the soil, was largely quantitative; more people could live in the given region, but their level of living was little better. Thus the great gains over the ages in the ability of men to exploit the resources of the earth, physical and biological, resulted in an increase in the number of people in the world rather than any marked increase in their material welfare.

Premodern Controls.—Only during the past hundred years or so have men anywhere come to apply really effective controls over their numbers and thus begun to achieve enduring freedom from natural factors. Some controls did of course exist in the societies of the past; and some peoples, the Incas and certain of the Polynesian and Melanesian primitives, for example, seem to have controlled their numbers so effectively that the general level of material welfare was considerably above that of bare subsistence. Moreover, in most societies of the past a small proportion of the population was able to live at a much higher than subsistence level. Ancient Egypt had its kings and princes and its rich landlords and merchants, Rome had its nobles and men of wealth, and China had its prospering landlords and mandarins. Although the mass of the population lived at or close to the level of bare subsistence, the favored few were able to remain few in number and thereby to maintain their favored position. There is much evidence, furthermore, that in most societies of the past people tried, generally without much success, to escape the tyranny of numbers. Thus in all premodern populations some one or a number of cultural factors entered in to temper in one way or another the operation of natural controls. Although over the long run these cultural factors did not keep very many of the premodern populations significantly above the level of subsistence, in the short run they were sometimes of considerable importance.

Infanticide.—Many animals destroy some of their offspring, usually by eating them. Presumably immediate hunger, rather than a recognition of the possibilities of ultimate hunger, motivates their doing so. Man, too, has destroyed his young, but in a considerably more complex way. In some instances, destruction of the newborn has been ostensibly directed toward some end other than that of limiting numbers—toward propitiating the gods by human sacrifice, fertilizing the soil by inoculating it with infant's blood, etc. Where infanticide has been deliberately employed to keep down population numbers, it has served as a social substitute for

natural death. It replaces, somewhat selectively, the natural check of a high infant mortality and relieves the adults in the population from competing with the newborn and thus somewhat lowers their death rate.¹

Infanticide is known to have been practiced in a limited way by most primitives and in all the civilizations of antiquity; and it is a fairly common practice in some contemporary societies. At least one people, the Spartans, made something of a rite of infanticide; they are supposed to have selected the choicest of the newborn for survival, destroying the remainder, much in the manner of a modern stockbreeder. Infanticide is, however, an exceedingly inefficient means of population control. In the first place the infant must be carried and born before it can be destroyed. Moreover, those immediately concerned, most particularly the infant's mother, are likely to have developed an attachment for the infant during the prenatal period that makes it difficult for them to reconcile themselves to destroying it. As a consequence, infanticide has with few exceptions been employed only as an act of desperation, as a harsh alternative to letting nature take its inexorable and ruthless way when there are too many mouths to feed. And those peoples who have highly developed ideas concerning the sanctity of human life consistently let the infant live long enough to die a "natural" death by starvation or else support the infant and let some adult starve to make room for it.

Destruction of Social Parasites.—In a "natural" population, where competition for survival is intense, the sick, the injured, and the aged are necessarily at a disadvantage; and unless the forms of competition are socially limited, they will be starved out. Most societies do provide some regulation of the competitive processes, so that the sick, the injured, and the aged can have some assurance that they will survive in spite of their infirmities. Nevertheless, in a subsistence population the temptation must always be great to violate institutional and other precepts and withhold support from the helpless members of the group so that the life of the newborn will be assured. When it comes to a choice between feeding an ailing elder and a healthy son, practical considerations weigh heavily in favor of the son. Although the young are parasitic, they become in time productive members of society. The hopelessly sick and the aged, on the other hand, will make no further contributions to the group; they are all loss with no prospect of gain.

¹ Infant mortality is usually calculated as the number of deaths of children under one year of age per 1,000 live births. In any subsistence population the infant mortality is exceedingly high. Even today in certain parts of China, India, and Africa the rate is upwards of 800; in contemporary America, on the other hand, it is in the neighborhood of 60. The death rate is usually given as the number of deaths per year per 1,000 of the population or segment thereof. The death rate in India is today at least four to five times as high as the rates—10 to 12—that obtain in modern Western countries.

Destruction or abandonment of the incompetent and aged is somewhat more economical than infanticide as a means of reducing population numbers. It eliminates the least useful rather than those who are potentially the most useful. The Australian aborigines deliberately utilized this control device; and no doubt many migratory peoples, hunters and herders, profited, albeit unwittingly, from the fact that the ill and aged had to be left behind as the tribe moved on. In most societies of the past as well as the present social taboos against deliberate destruction of members and the social prestige of those of advanced years (in many societies the parasitic elders are by social definition the most valued members of the group) have precluded significant application of this means of tempering the operation of natural controls. Even among the perpetually impoverished masses of India and China, where life is exceedingly "cheap," the tendency is to support the very old at the expense of those who are younger and more useful.¹

Abortion.—A refinement of infanticide is abortion, the destruction of the human animal before it emerges naturally from the womb. Two general techniques, mechanical abortion and the use of drugs, have been used. The first is hazardous to the health of the mother, and the second is of uncertain efficacy. Many primitives have used abortifacients; and the consistent and general use of such drugs, unreliable in any individual case, may have been the way that some primitives were able to keep down their numbers. Civilized peoples have in general shown a preference for mechanical abortion, probably because of their somewhat better knowledge of anatomy and their ability to fashion and use metal tools. Mechanical abortion is believed to have been the major deliberate means of population control in ancient Greece and Rome, where it was used extensively, particularly by the more favored economic classes. Professional prostitutes have almost everywhere relied upon mechanical abortion to keep them in working condition; apparently the risks attendant upon abortion have been accepted as a normal hazard of their occupation. In many societies of the past, as in all contemporary Western societies, abortion, whether mechanically or chemically induced, has been either contrary to religious sanctions or prohibited by law. Nonetheless, abortion has probably been the most prevalent as well as the most effective of all the means of population control that were available prior to the development of contraceptives.

¹ See L. W. Simmons, "The Position and Treatment of the Aged in Primitive and Other Societies" (*Amer. Anthropol.*, vol. 47, pp. 433-438, 1945).

The destruction of social parasites as a means of enabling others to survive must be distinguished from euthanasia, the killing of the hopelessly ill for humanitarian reasons, and from the politically motivated killing of some class within the population, such as the attempted extermination of Jews and other non-Aryans by the Germans under the Nazi regime.

Sex Taboos.—Every culture places some sorts of restrictions upon the relations of the sexes and thus indirectly limits the frequency of sexual intercourse among the members of the group. Where the family was a prominent element of the social organization, premarital intercourse was generally prohibited, at least for women. This prohibition somewhat shortened the childbearing period of the average woman, since ordinarily marriage was delayed for a number of years beyond the age of puberty. Some societies, such as those of medieval Europe, were able, by encouraging celibacy, to remove a few of the members from the procreative personnel of the group. Some societies enforced, or attempted to enforce, the prohibition of all sexual intercourse during certain periods. Even tribal and other nonfamily-centered societies invariably placed limits on sexual promiscuity and in various other ways restricted the expression of the sex impulse. The taboos that surrounded sexual life were, however, directed more toward ascertaining the paternity of children who were conceived than toward limiting the number of conceptions. And there is every reason to believe that in most societies of the past most women conceived with monotonous regularity throughout their childbearing years.

Emigration.—Pressure of population numbers may be temporarily relieved by the emigration of some members of the group to new localities. Population pressure is thought to have been behind many of the great migrations of history, such as the movement of the Goths and Visigoths into western Europe, the early migrations of peoples from Asia into North and thence South America, and the settlement of the South Sea islands by peoples from India or Burma. Population pressure in nineteenth-century Europe was unquestionably an important factor in the massive migrations to America that occurred during that century; and the settlement of the western parts of the United States was in part accomplished by people who were "pushed out" of the older centers of population in the eastern areas.

Emigration has, however, never been more than a temporary solution to the problem of excess numbers; for it obviously does not change the conditions that make for large numbers within an area and for a subsistence level of living. Moreover, in most instances the excess numbers have had no place to move to; and even when they have had somewhere to go, they have often remained where they were. The malnutrition and hunger that are the normal lot of any subsistence population and the acute famine that occurs whenever the crops fail or the normal food supply is for any other cause reduced are, in fact, more likely to produce apathy than emigration.

War.—The role of war as a social substitute for natural checks to population growth has been much exaggerated. It is true that most of the

peoples of the past as of the present have intermittently engaged in warfare. But the proportion of a social group that is actually killed in battle is usually very small and most of those killed are males, whereas it is the number of females of childbearing age rather than the number of males that mainly determines the reproductive rate of a subsistence group. The principal effects of a war upon population numbers are indirect rather than direct. War induces a harshening of the conditions of life of the groups involved and a decline in their productivity, which conditions lead to an increase in infant mortality, a growth of epidemic diseases, and a general rise in the civilian death rate. The end result has often been a sharp, temporary reduction in population numbers; but that reduction has not always been followed by a rise in the material well-being of the survivors. For generally the productivity of the group has remained low for a considerable time; and as production has slowly returned to normal, so too have population numbers.

Social Incentives to Procreation.—Counteracting the various means of control over population numbers are the many social encouragements to procreation. Every society provides some sorts of social incentives for having and rearing children. In the more primitive societies, the incentives were a part of the mechanism of group survival; they helped assure that the group would be perpetuated, generation after generation, whatever the cost to individual members. Social rewards for bearing and rearing the maximum possible number of children have consisted of honors to be bestowed on the individual in the afterlife, of prestige accorded him by the other members of the group, or of assurance of support during his old age. Under the old patriarchal family system a man's wealth could literally be measured by the number of his sons. Although he had to support them while they were young, they had to support him when he grew old. Moreover, as soon as they were old enough to work, they began to contribute to the family income. This economic incentive to having children, particularly male children, was usually supplemented by sentimental views or religious beliefs regarding the need to maintain the family line. In the Chinese family system, for example, it was incumbent on a man to perpetuate his family line, for his welfare in the afterlife depended upon the existence of descendants who would reverence his spirit.

Where, as in the secular societies of ancient Greece and Rome, children have been an economic liability without future recompense, political incentives to childbearing have invariably appeared. These have taken such forms as the levying of special taxes on bachelors and on childless couples, the granting of governmental subsidies for children, and the bestowing of civic honors and rights on the parents of numerous children. Politically established rewards have always been part of a deliberate

political policy; they have been attempts to offset the conditions that encouraged resort to abortion and other individual efforts to keep down numbers. Usually such a policy has stemmed from militaristic ambitions or from fear of military attack by a stronger people. The prospect of war has thus often encouraged an increase in the numbers that war is supposed to keep down.

THE GROWTH OF MODERN POPULATIONS

Such evidence as is available indicates that in the past social incentives to procreation have in most societies more or less canceled out the ability and willingness of the population to control their numbers. Where, as in ancient Greece and Rome, infanticide and abortion were fairly common and wars and epidemic diseases were frequent, population numbers may have been kept under control for considerable periods. And, as has been mentioned, some primitive peoples seem to have been able to restrict their numbers, although how they did so is something of a mystery. For most of the peoples of most of the societies of the past, however, the pressure of population numbers has made life a grim and unceasing struggle to keep alive, a struggle in which many, especially the very young and the very old, have necessarily failed. Even where an artificial balance has been maintained in the biological habitat, determination of human numbers has been more a natural process than a socially controlled one.

This condition still obtains for at least half of the people of the world, among them the masses of India and China; and only during the past century have the peoples of Europe and North America and some other Western societies been able to achieve and maintain effective controls over their numbers. Today every modern society has a socially controlled, as distinct from a nature-controlled, population; a socially determined standard of material welfare rather than a nature-determined subsistence level; and the ability to profit qualitatively rather than just quantitatively from increased material productivity.

Technology and the Rise of Modern Populations.—From the period of Roman domination until well into the Middle Ages the population of western Europe was small and subsistence in character. Agricultural technology had not improved over what it had been in Roman times, and the decline of the Roman Empire and the rise of feudalism had forced a withdrawal of much land from cultivation (for only the land immediately surrounding the feudal stronghold was safe to farm). Presumably the population of western Europe during feudal times was considerably less than the five million estimated to have lived there under Roman rule. As feudalism in turn declined, lands were brought back into cultiva-

tion, and the best of the agricultural techniques that had been in use spread throughout Europe. By the end of the first millennium population numbers had slowly risen to perhaps ten million.¹

Thereafter the population of Europe grew at an increasing rate. From the eleventh to the sixteenth century it grew perhaps fivefold, largely, it is thought, as a consequence of marked improvements in agricultural technology. A series of inventions, such as the iron-tipped plow and the yoke, which permitted efficient use of horses to draw plows, made possible the production of much more food from a given piece of land. The development of methods of soil drainage made formerly unproductive lands available for cultivation, and the gradual political integration of the various peoples of western Europe and the development of new means of transportation encouraged specialization in land usage. All these changes increased production of the necessities of life. Moreover, toward the end of the period, when Europeans began to explore the world, some consumable goods were being secured from abroad.

Life in the Middle Ages.—How much of the increased production during the Middle Ages was absorbed by the increase of population numbers is unknown. The comparatively large class of townsmen that grew up during this period certainly lived considerably above the subsistence level. But it is doubtful whether the mass of the people of medieval Europe were much better off materially than were those of the "dark ages," and they definitely were not well off by contemporary standards. If medieval populations did fail to keep pace with the growth in production, it was only because of the harsh circumstances that accompanied that growth—specifically, recurrent plagues and well-nigh perpetual warfare. The plagues that swept Europe during this period were, as has been indicated, a direct consequence of the breaking of feudal isolation, the merging and mixing of many peoples, and the rise of towns and cities. Warfare was the *modus operandi* of the political unification that made the new production techniques possible and that was in turn required for their continued application.

Deaths through war and plague, by limiting the growth of medieval populations, may have enabled some of the classes in the population to maintain a higher-than-subsistence level of living. But deaths through war, through the famine that usually followed in the wake of war, and through plague can hardly have been conducive to the happiness of the survivors. The idea, so prevalent among contemporary romanticists, that before the coming of the industrial revolution life in western Europe was somehow calm, comfortable, and altogether enjoyable is very wide

¹ These figures are really guesses rather than estimates. For a brief analysis of the limited data actually existent, see R. R. Kuczynski's article, "Population: History and Statistics" (*Encycl. Soc. Sci.*, vol. 12, pp. 240-248).

of the truth. To all intents and purposes the 50 million or so who were living in western Europe at the beginning of the sixteenth century were little better off than the 10 million of the tenth century or the 5 million of Roman times. By then, in other words, improving production techniques had brought little improvement in the material welfare of the peoples of Europe.

The Period of Rapid Growth.—In terms of previous rates of growth, the rise in population numbers during the medieval period was spectacular. This rise was, however, but the beginning of a period of increase in numbers that is only now drawing to a close. From the opening of the sixteenth century the population of western Europe increased on the average about 100 million each century, from about 50 million in 1500 to 500 million in 1930. During the same period the population of the world as a whole also increased, although at a slower rate. It is estimated that in 1650 the population of the world was slightly in excess of 450 million. By 1930 it was approaching 2 billion.

Many factors contributed to this general and marked increase in the population of the world over the past four hundred years. The most important was the diffusion to non-Western peoples of the continually improved agricultural technology of Western peoples. New lands were also being discovered by Western peoples, settled by them, and brought under cultivation. And with the development after 1800 of increasingly efficient means of transportation and the consequent growth of inter-continental trade, regional specialization in agricultural production became possible.

Up to about 1850, when other factors began to enter in, the growth of numbers was directly related to the increased food production and the somewhat diminished rigors of life. Fewer people died from the diseases that are favored by continual malnutrition and fewer from outright starvation. The result was some lowering of infant mortality rates and some lengthening of the average life span. Deaths from epidemic diseases, both of infants and adults, were, on the other hand, if anything somewhat higher than they had been during earlier times.

The Biological Sciences and Population.—The biological sciences had contributed little if anything to the industrial revolution, to the commercial revival, or to the exploration, exploitation, and settlement of the New World. By the eighteenth century some gains had been made empirically in the field of public sanitation, but changing social practices produced new problems of disease control faster than the old ones could be solved. When, toward the middle of the last century, the biological sciences began to be applied to problems of human welfare, the effects on population numbers were pronounced. Application of the biological sciences brought about a great increase in the production of food; it

led to a sharp decline, particularly in Western societies, in the death rates; and it made possible effective control of the birth rate. The first two aspects more or less canceled out; the growing food supply was offset by the falling death rates. The third aspect worked a major revolution in the affairs of men.

The ways whereby application of biological knowledge to the control of the biological habitat made possible an increase in food production and a reduction of deaths by epidemic disease were discussed in the preceding chapter. Epidemic diseases had been the important factor in retarding the growth of populations in the period immediately preceding, for ample food was little protection against typhus, typhoid, smallpox, malaria, and the other so-called "mass killers." With the application of science to the problems of public health and medical practice, epidemic diseases, the last of the "natural" checks to population growth, began to lose their significance as a control factor in Western societies.¹ If, therefore, no substitute check to population growth had come into operation, the rate of population increase would no doubt have risen spectacularly during the last hundred years; and the growth in numbers might well have absorbed the whole of the increase in production that was brought about during the same period. As in the Middle Ages, there would have been more people rather than more people who were better off.

A new control factor did, however, come into operation; and after 1850 population growth rates began to fall off, first in the older countries of Europe and later in the United States and elsewhere. This control factor was the development and dissemination of efficient techniques of contraception.

Contraceptive Controls.—Whereas infanticide and abortion are destruction of life, contraception is prevention of life. Its peculiar virtue as a means of controlling populations is its economy; it does not, like infanticide, waste what has already been produced or interrupt, like abortion, a biological process that is already under way. Moreover, the financial and disutility costs to the individual are comparatively small. Because contraception is in all senses economical, this method of control has gradually been adopted, against great religious and legal resistance, by a considerable proportion of Western peoples. And unlike infanticide and abortion, contraceptive control is not resorted to as a last, desperate

¹For data on recent developments in the United States, see F. E. Linder and R. D. Grove, *Vital Statistics Rates in the United States, 1900-1940* (U. S. Government Printing Office, Washington, D. C., 1943). See also *Births, Infant Mortality, Maternal Mortality* (Children's Bureau, U. S. Department of Labor, Washington, D. C., 1943); L. I. Dublin, "Mortality" (*Encycl. Soc. Sci.*, vol. 11, pp. 22-32); L. I. Dublin and A. J. Lotka, *Length of Life: A Study of the Life Table* (Ronald, New York, 1935); and H. F. Dorn, "The Potential Rate of Increase of the Population of the United States" (*Amer. J. Sociol.*, vol. 48, pp. 173-187, 1942).

measure by those who see a new child as an intolerable social and economic burden, but is employed by people who are not yet desperate and do not intend to become so. That is to say, contraceptive measures, unlike antecedent means of control, are undertaken by those who wish to preserve a higher-than-subsistence level of living. As a consequence of the new contraceptive techniques the maintenance over time of a high level of material welfare for the mass of the people of the world is now possible. That some peoples of today fail to take advantage of these techniques is a consequence of ignorance, improvidence, and religious scruples, the persistence of ancient sentiments, and the ambitions of politicians and warmongers.

A few premodern peoples seem to have had and to have used crude contraceptive methods. The development of economical and effective devices, however, awaited the growth of scientific knowledge concerning the character and role of spermatozoa. The invention of a chemical means of destroying spermatozoa occurred in France about 1830.¹ Before the end of the century, this means was known to the urban middle and upper classes of all Western countries. In the first decades of the present century contraceptive techniques gradually became known and available to the lower classes and to rural peoples. Meanwhile, many variations and improvements were made upon the original chemical method. Mechanical devices, cheap and comparatively easy to use, were developed. Recently combinations of chemical and mechanical means have appeared; and these are now in general use among most of the educated, and not a small proportion of the uneducated, peoples of the Western world.

The Standard of Living.—The development of cheap and effective contraceptive devices made control of population numbers feasible. The use of contraceptive devices, however, has depended upon a high standard of living and has often had to wait until such a standard developed.² Historically, it has not been the poor, who could least afford children, but the well to do, who could most afford children, who have most rapidly adopted the use of contraceptives as those devices have been made available to them. For the well to do have had something to protect—a high standard of living—from loss by increasing numbers.

A high standard of material welfare is as much a matter of values, sentiments, and attitudes as it is of material things. The peasant who de-

¹ For further details on the history of contraceptive techniques, see F. H. Hankins's article, "Birth Control" (*Encycl. Soc. Sci.*, vol. 2, pp. 559-565).

² For comparative purposes, see E. W. Martin, *The Standard of Living in 1860* (University of Chicago Press, Chicago, 1942). See also R. Heberle, "Social Factors in Birth Control" (*Amer. Sociol. Rev.*, vol. 6, pp. 794-805, 1941); and J. W. Riley and M. White, "The Uses of Various Methods of Contraception" (*Amer. Sociol. Rev.*, vol. 4, pp. 890-903, 1940).

stroys a newborn infant merely because keeping that infant alive would take necessary food from his own mouth and the mouths of his wife, his parents, and his other children has the values, sentiments, and attitudes of a subsistence standard of living. He is choosing between hunger for the many and death for the one. Most of the peoples of the past have had just this subsistence standard. But when men become, for whatever reasons, accustomed to a level of living above that of mere subsistence—to plentiful food rather than just enough to go around, to good food rather than just something that can be eaten, to a comfortable home rather than just a protection from the elements, to a short workday rather than unending toil, and to a secure future rather than day-to-day existence—they may come to value this level of living more than the tradition of having many children.

Historic Rise in the Standard of Living.—A number of interrelated factors have contributed during the past two centuries to a gradual and rather general rise in the standard of living of Western peoples and a marked decline in the social values placed upon children. The net effect has been the provision of new and constantly intensifying incentives for the restriction of family size. These new incentives and the new techniques of contraception have together led to a sharp and continuing decline in the birth rates of most modern societies. During the past fifty years the birth rates of many European countries have fallen by as much as 50 per cent; even in the United States, which is still underpopulated in European terms, the birth rate declined during the same period by nearly one-third. These declines in birth rates have gone far toward canceling out the effects upon population numbers of the declines, previously described, in the death rates.

The gradual and general rise of the standard of living of Western peoples has come about mainly as a consequence of the fact that during certain periods and in certain areas the means of subsistence increased at such a rate that it could not be absorbed by natural growth of population numbers. Where this happened, the population became sufficiently accustomed to the higher-than-subsistence level of living to struggle to preserve that level. The struggle took two directions: toward keeping the production of material goods increasing more rapidly than the population, and toward checking the natural increases in population that a higher-than-subsistence level would normally bring about. In terms of family units, a father would either increase his income as rapidly as children were added to the family or stop, or at least slow down, the addition of children. Since for most fathers, as for all societies, there is a definite limit to the rate at which income can be increased, endeavors to maintain a higher-than-subsistence standard have necessarily tended to take the form of birth control. Little by little, almost family by family,

the standard of Western peoples has risen and, in rising, has led to a reduction of family size.

Ireland: an Illustration.—A striking illustration, small scale and uncomplicated, of the effect upon population numbers of a rise in the standard of living is afforded by the recent history of Ireland. At the opening of the seventeenth century, the population of this island was less than one million, the majority of whom lived at the subsistence level. Except among the members of the small landlord class, mainly English in origin, the only checks to population were natural ones. During the seventeenth century the potato, introduced a short time before from America, became the basic and an expanding source of food for the masses. The reasons for the extensive cultivation of the potato were in part political; it had long been the practice of the landlords to take the larger share of the products of the land; but since they were not interested in the lowly potato, all that the peasant grew was his own to use. And because Irish soil and climate were favorable to the potato, a fairly ambitious peasant could plant and tend enough potatoes to keep himself and perhaps three other people alive.

By 1800 the population of Ireland had increased to about eight million, a consequence of the increase in the food supply. This vast increase in population numbers apparently absorbed the whole of the increased production of food, for the average Irish peasant was no better off than he had been when there were but one million of him. In 1846 an almost total failure of the potato crop occurred, and it was some years before the food supply returned to its former level. In the intervening years, the population of Ireland declined by one-half, mainly through starvation but in significant part through emigration to America. When food production began to increase, the remaining Irish people began to enjoy a comparatively high level of material well-being, one so far above the subsistence level that the excess was not absorbed by increasing numbers before the people had become accustomed to, and intent upon keeping, that high level. Since 1850, the people of Ireland, in spite of religious urgings to the contrary, have taken positive measures to control their numbers and have thereby maintained their standard of living. Although the production of material goods, particularly food, has continued to rise, the population of Ireland has remained at about five million.

What happened to the Irish people has happened in different ways and at different times to most of the peoples of the Western world. As various peoples have come to place a higher value on a given level of material welfare than on large numbers of children, they have begun to exercise control over their numbers. The development and dissemination of contraceptive techniques has simply given them a convenient and effective means of achieving that control.

The Disutility of Children.—The historic rise in the general standard of living has been accompanied by a growing disutility of large families. Industrialization, with concomitant urbanization, has made children, once an economic as well as a social asset, a direct and obvious burden to their parents. On the farm and in cottage industry children began to pay their way at an early age. In the industrial city of today they must be supported at least until they reach their teens and often for much longer. On a farm or in a village the arrival of a child did not greatly disturb the living arrangements of the parents. In a city apartment or tenement, a new arrival poses adjustment problems of considerable magnitude. The increasing disutility of children has supplemented the rising standard of living as an inducement to control numbers, and together these factors have brought a sharp decline in the birth rates of modern peoples.

Contemporary Controls.—The development of contraceptive techniques has proved to be a turning point in the history of modern populations, and contraceptives are probably the major means by which contemporary birth rates are kept down. So strong, however, are the incentives for keeping down numbers that a very considerable proportion of the conceptions that do occur are terminated by abortion. Medical authorities are of the opinion that between one-half and two-thirds of the conceptions that occur in Western societies end in abortion; *i.e.*, that the abortion rates are as high as or higher than the recorded birth rates.¹ Since in all modern countries abortion is illegal except when necessary to save the life or preserve the health of the pregnant woman, and, being illegal, costly, the very considerable use of it demonstrates the strength of the incentives to keep down numbers.² Infanticide is still prevalent in some of the more backward countries, such as those of eastern Europe; but it is not a significant factor in western Europe or in America, for the parents of an unwanted child are more likely to dispose of the infant on the steps of a foundling home than to kill it and risk apprehension as murderers. Deliberate killing of the physically incompetent and aged is also rare in modern societies. Frequently, however, these social parasites are left to fend for themselves and are thus disposed of in an impersonal but nonetheless effective way. For an impoverished sick man who cannot obtain the medical care that he could if he were affluent and who dies

¹ National Committee on Maternal Health, *The Abortion Problem* (Williams & Wilkins, Baltimore, 1944).

² Shortly after the Revolution and in accordance with Communistic ideology, the Russian government legalized abortion and established abortion clinics. Shortly before the beginning of the Second World War the governmental policy was reversed. Today the regulations regarding abortion are as stringent in Russia as in the United States. Whether or not the Russian government is more successful than other governments in preventing resort to abortion is not at present known.

from lack of such care is just as much killed by society as he would be if he were deliberately shot.

Differential Birth Rates.—Although the population numbers of all Western societies are now socially controlled, the degree of control varies considerably from society to society and from class to class within each society.¹ In general there is an inverse relationship between the standard of living and the birth rate—i.e., the higher the standard of living of the country or class, the lower the birth rate. This relationship does not, however, always obtain; for many special factors are always involved. Thus, although rural people in general have a higher birth rate and a lower standard of living than urban dwellers, the French peasantry, because of a peculiarity of land-inheritance laws, have reduced their birth rate to about that of the urban French, while their standard of living has remained relatively low. Moreover, the birth rate of the preponderantly rural Irish began to fall sooner and to decline faster than the birth rates of most of the highly industrialized countries of Europe. In some instances a direct relationship has existed between the standard of living and the birth rate. The birth rates of the United States, Australia, New Zealand, and other “new” lands with comparatively high standards of living, for example, did not begin to decline until comparatively recent times, a consequence of the fact that economic opportunities were growing more rapidly than were the populations.

The population numbers of most non-Western countries are still more or less uncontrolled.² The great majority of the peoples of India, Asia, South America, and Africa live close to the level of bare subsistence and have exceedingly high birth rates. Unless and until these populations begin to control their numbers, there is little possibility of improving their material welfare. Their situation is comparable to that of Europe during the Middle Ages; increases in production are quickly absorbed by proportionate increases in numbers. This fact is commonly overlooked by political and economic reformers, who are inclined to place the blame for mass poverty upon inept political leadership or upon lack of industrialization. The truth is that nothing can be done by political or economic measures to raise for long the level of living of a people who cannot, or at least do not, control their numbers. What India needs most, for

¹ For some of the recent studies, see B. D. Karpinos and C. V. Kiser, “The Differential Fertility and Potential Rates of Growth of Various Income and Educational Classes of Urban Population in the United States” (*Milbank Memorial Fund Quart.*, vol. 17, pp. 378-394, 1939); J. W. Innis, *Class Fertility Trends in England and Wales, 1921-1931* (Princeton University Press, Princeton, 1938); and C. Tietze, “Differential Reproduction in the United States” (*Amer. J. Sociol.*, vol. 49, pp. 242-247, 1943).

² For a survey of the population conditions and problems of the present-day world, see K. Davis, ed., “World Population in Transition” (*The Annals*, January, 1945).

example, is not political freedom but birth control; unless the ignorance, the religious beliefs, and the family values that now make the Indian population an uncontrolled one are dispelled, neither freedom from British rule nor extensive industrialization will improve the material lot of the average East Indian.

Population Growth and Social Change.—As the birth rates of Western peoples have declined and the long period of rapid population growth has come toward a close, some social prognosticators have expressed the pessimistic view that Western societies are reaching “maturity” and, like an old organism, will become inflexible and enfeebled.¹ The concern of those who have a vested interest in population growth—professional educators, real-estate promoters, diaper manufacturers, etc.—is understandable. But the idea that a numerically stable social population necessarily means a decadent or even a stable social system is untenable.

Population growth has unquestionably been a significant factor in the social changes that have occurred during the past few hundred years. Made possible by technological and organizational changes, the rapid growth in population in turn provided some stimulus to further technological and organizational changes. Numerical increase has itself posed new problems for solution; just as an increase in the number of children in a household necessitates new living arrangements or additions to the establishment, so, as villages grew into towns, streets had to be widened and more elaborate political organization had to be developed. Moreover, in a rapidly growing population a more than normal proportion of the members are in the younger age groups, and social arrangements have had to be adapted to this condition.

The fact that population growth provides the stimulus for certain kinds of changes and has in the immediate past been associated with many social changes does not, however, mean that technological and organizational developments will necessarily cease now that the population has stopped growing. It means, rather, that a change must be made in the direction of these developments—from enlargement to refinement, from quantitative expansion to qualitative perfecting. The family that has ceased to grow need not settle back into dull complacency. It can improve the home that no longer needs additions, replace the old plumbing with more efficient and convenient facilities, etc. Likewise the city that is no longer growing need not go to sleep. There is no end of work that might be undertaken to increase the livability and the economic and social efficiency of our present cities. During the past hundred years and more

¹ For an example of this sort of thinking, see W. B. Reddaway, *The Economics of a Declining Population* (Macmillan, New York, 1939). For an attack upon this view, see G. Terborgh, *The Bogey of Economic Maturity* (Machinery and Allied Products Institute, Chicago, 1945).

our cities have grown enormously; and architects, contractors, and workers have been kept busy building. What has been built is, however, subject to a great deal of qualitative improvement; and a shift from bigger to better cities (and towns, villages, farmhouses, etc.) might be made without in any degree reducing the dynamic character of contemporary societies. And thus with all the other aspects of modern society. A rapidly expanding population is dynamic in a quantitative way—bigger and bigger and more and more. There is no inherent reason why a numerically stable population could not be equally dynamic in the unending realization of qualitative goals—better and better and more and more socially satisfying.

Numerical stability of a population does mean, especially now when hygienic and medical practices make possible a considerable increase in the average life span, a higher proportion of older members and a lower proportion of younger members. As this change in age composition occurs, many social agencies and practices must necessarily change. There will be less need for schools and more need for old-age homes, less demand for dining-and-dancing places and more for quiet resorts by the sea, less use for diapers and more for wheel chairs. But that the change in age composition will necessarily result in less individual initiative, less adventuresomeness, less ambition, and less of the other personal qualities and drives that make for social and technological changes does not follow.¹ The analogy between an old man and a stable population is not a valid one. A society may grow old in the sense that it becomes encumbered with antiquated traditions and pointless rituals. But there is no reason to think that it was the high proportion of younger members in Western populations that led to the discarding of old practices and the devising of new ones during the past few hundred years. Actually, it was the discarding of old cultural elements and the invention of new ones that led to a growth of population and hence to an unusually high proportion of younger members.

Insofar as social change is concerned, the growth rate and age composition of a population are far less important than its state of health and of mind. Historically, it has been those peoples who have somehow come to have a higher-than-subsistence level of living and thus have come to want more than a bare livelihood who have displayed the energy and ingenuity that make for social change. Population growth is not of itself sufficient; the impoverished masses, the lower classes of Western societies, and the subsistence societies, such as those of India and China, all of which

¹ On the contrary, O. Pollak ("Conservatism in Latter Maturity and Old Age," *Amer. Sociol. Rev.*, vol. 8, pp. 175-179, 1943) finds no relation between age and conservatism, while H. Hart and H. Hertz ("Expectation of Life as an Index of Social Progress," *Amer. Sociol. Rev.*, vol. 9, pp. 609-621, 1944) consider the aging of a population an indication of the growing adequacy of the society.

have been increasing numerically, have shown little ability to change their modes of social life. Even as wealth begets wealth, so a high standard of living provides the incentives and the circumstances for improvements in that standard.

QUALITATIVE ASPECTS OF THE SOCIAL POPULATION

Health, Vitality, and the Standard of Living.—There is a close, but not unvarying, relationship between the material welfare of a people and their level of physical health and vitality. As a general rule, a subsistence population is poor in health and low in physical vigor. The poverty of the impoverished tends thus to be self-perpetuating. Because there are so many mouths to feed that no one gets enough to eat, chronic malnutrition and associated diseases are prevalent; and these induce physical incompetence, apathy, and lack of enterprise. And because the members of the subsistence population are apathetic and unenergetic, they make shift with the cultural *status quo*. All the subsistence populations of the contemporary world are socially backward and unprogressive; and their indifference to the possibilities of improving their material welfare is in no small measure a consequence of their low level of physical well-being.

The personal factors that make for social change are not simple matters of physical energy. A healthy man may be a lazy one, a vigorous man may expend his energies in fruitless channels, and a sickly man may drive himself to inventive achievement. But the social conditions that give rise to individual initiative, provide opportunity, and welcome invention do not exist in a subsistence population. On the whole, an underfed, disease-ridden people are a lethargic people, content to live a bestial life if only because they lack the energy to struggle for more.

Survival of the Fittest.—Modern controlled populations, in which the birth rates are low and sanitary measures and medical care make possible control of disease and cure of the sick, are thought by some to be deteriorating biologically. The assumption is that in these populations the inherently weak are being protected against those natural forces that would otherwise dispose of them—i.e., that modern societies perpetuate the biologically unfit at the expense of the fit.¹ This assumption is equivalent to presuming that malnutrition, disease, poor housing, and arduous physical labor are somehow “good” for the human race. For wherever natural forces operate, these conditions prevail.

In a population controlled mainly by natural checks, only the “strongest” survive. Weakening children, the sick, and the enfeebled die. Such a population consists, therefore, mainly of the fittest of the children born

¹ The thesis that modern society encourages the survival of the unfit and is therefore destroying itself has recently been reasserted by E. A. Hooton in *Twilight of Man* (Macmillan, New York, 1939).

and of adults in the prime of life. But the "strong" who survive are merely the less weak, and the strongest of them are weaklings compared to the average member of a socially controlled population. All constantly suffer from malnutrition and are perpetually diseased. The life span is short; men and women are old at thirty, dead at forty. Men are worn out in the unending struggle to wrest a livelihood from nature, women in the constant bearing of children, most of whom promptly die.

"Natural" Man.—The idea that primitive peoples led an idyllic life and were vigorous and virile creatures was current in early modern Europe. Early explorers were alert for evidence to support this view and of course they found it, or at least invented it. The idea of the physical perfection of "natural" man was ultimately blown up to a philosophical doctrine by Rousseau, and it has persisted in one form or another down to the present time. The cult of nudism, prevalent in America during the late 1920's, was justified on the grounds that civilization, specifically clothing, was inimical to the physical and moral welfare of man; and some of the more quackish of the healers and the more ridiculous of the health fads, such as diets of raw foods, fruits, or nuts, have been derived from the assumption that ill-health is caused by violating the natural way of life.

In nature, however, as we have seen, freedom from malnutrition and disease is the exception rather than the rule. In an untended cabbage field only the best will survive; but those best will be a very poor lot. A good cabbage, a good apple, or a fine ear of corn is not a work of nature but the handiwork of man. In the same way, a sound and healthy human being is not a survivor of natural competition but a product of social protection. Unless men not only dominate their biological habitat but so control their own numbers that they need not compete with one another for survival, they, like the cabbages in an untended field, will be few in number and small in size. The boundless good humor and good health and the inexhaustible energy and long life of "natural" man are a fable. The more natural, *i.e.*, the more socially uncontrolled, the life of man is, the shorter his stature, the shorter his life, and the less his physical vigor.

As men have gained more and more control over their biological habitats and over their own numbers, they have grown also in stature, in length of life, and in vigor. Such evidence as the height of doors, the size of armor, the length of beds, etc., indicates that the average height of adult males of the upper classes in medieval Europe was not much in excess of five feet. The average height of adult males in America was approximately 5 feet 7 inches in 1920 and 5 feet 8½ inches by 1940. Immigrants to America from the poorer countries of Europe have characteristically been of smaller stature than native-born Americans. Their children, however, on a diet of American food and with protection from

disease and overwork, have tended to approach the American average; and by the third generation no differences in height are apparent.

Society and Health.—Good health is not primarily a matter of biological fitness to survive. It is, rather, the product of adequate food, protection from bacteria and other organic predators, and freedom from exhausting labor. These conditions are the exact converse of a “state of nature”; they are culturally provided, and hence “artificial.” In general the higher the level of material welfare of the population, the higher is their health level. When to a high-level of material welfare is added modern ability to prevent and check contagious diseases, the level of health of a population is immeasurably above that of any “natural” population. The general health level of the American people is far lower than it need be, for many segments of the American population live close to the subsistence level and have yet to benefit from modern sanitary and medical techniques. Even so, the general health level of the American people is considerably above that of most European peoples; and the general health level of even the poorest of Europeans (the Italian peasantry, for example) is considerably above that of most of the other peoples of the world. The lowest health levels are found among the masses of India and the natives of Africa and Central and South America. These low levels are associated with subsistence standards of living, primitive sanitary and medical techniques, premodern production techniques, and cumbersome and rigid patterns of social organization.

Within each of the modern societies, different health levels obtain for the various segments of the population. There is a general relationship between income and health, although exceptionally high income does not mean exceptionally good health, since among the very rich other factors, such as high tempo of living or overindulgence, may cancel out the advantages to health of adequate food and good medical care. There is also a significant relationship between occupation and health. Some occupations, such as mining, involve severe health hazards. Physicians, business executives, persons in the entertainment field, and others who because of their occupations lead intense and irregular lives have a generally poorer health record than do those in less exhausting occupations, a fact that is reflected in insurance rates for the various occupational groups. On the whole, rural people have a slightly lower death rate than urban. This fact is subject to various interpretations: it may mean that the sanitary problems arising from urban congestion have not yet been satisfactorily solved; it may mean that the tempo and confusion of life in the city have significantly deleterious effects upon health; or it may simply be a statistical illusion. More extensive studies than any that have yet been made will be necessary before the latter possibility can be ruled out.

In addition to class, occupational, and rural-urban differences in health levels there are also some significant regional variations. Our Southern states, where public health is more a theory than a practice and where certain dietary customs and traditional practices encourage otherwise unnecessary malnutrition and disease, have a poor health record in comparison with the nation as a whole. From the standpoint of health, it is somewhat better to be born in a squalid New York tenement than on a squalid Southern farm.

Society and Disease.—In all modern societies, particularly among the favored classes, death rates from contagious diseases have been declining for nearly a century. But as the epidemic diseases have been brought under control, other physical disabilities—circulatory disorders, cancer, and various degenerative conditions—have apparently become more common, a striking illustration of the complexity and dynamic character of the factors that affect men. In part this increase in noncontagious disabilities is a function of the lengthening life span; cancer, for example, is primarily a disease of old age. But in considerable part, the increase in these diseases is a product of the modern way of life. Nervous tensions that are induced by the stresses and strains of social disorganization and social change are now thought to be responsible for much of the high blood pressure, faulty heart action, gastric ulcers, etc., that appear today. The psychosomatic nature of many disorders has only recently been explored by medical scientists. Whether psychosomatic disabilities were as prevalent in premodern as in modern societies is not known, but that there is a close relationship between such disorders and the “way of life” is no longer doubted. For one thing, the incidence of these disorders varies among the different occupational groups in contemporary societies; gastric ulcers, for example, are especially prevalent among business executives, heart disease among members of the medical profession, etc.¹

Although much is yet to be learned, many students of mental disorders, as distinct from physical diseases, believe them to be directly related to the character of social life. The available evidence suggests that the functional disorders of the mind—disorders that do not arise from tissue damage or deterioration—are socially induced and that the more dynamic and hence the more confused and conflicting the social milieu, the higher is the incidence of these disorders.²

¹ See H. F. Dunbar, *Emotions and Bodily Changes: A Survey of Literature on Psychosomatic Interrelationships, 1910-1933* (Columbia University Press, New York, 1935); and E. Weiss and O. S. English, *Psychosomatic Medicine* (Saunders, Philadelphia, 1943).

² R. E. L. Faris and H. W. Dunham, *Mental Disorders in Urban Areas: An Ecological Study of Schizophrenia and Other Psychoses* (University of Chicago Press, Chicago, 1939). See also B. W. Aginsky, “Psychopathic Trends in Culture” (*Character & Pers.*, vol. 7, pp. 331-343, 1939); C. Landis and J. D. Page, *Modern*

If these interpretations are valid, it would seem that psychosomatic diseases and functional psychoses are the price that men pay for social change. If so, they are an exceedingly small price for the comparative freedom from starvation and contagious diseases that recent changes in Western societies have made possible. Nor are they necessarily an inevitably continuing price. The stresses and strains of modern society arise from what may well prove to be no more than a transitional period, a period between man's learning to live with nature, *i.e.*, to control physical and biological nature to his own ends, and his learning to live with his fellow human beings.

THE RACISM AND EUGENICS FALLACIES

The idea that nature works for the best interests of mankind so that any social interference with natural processes is contrary to human welfare takes many forms. One such form is the vague belief, already discussed, that current controls so operate to encourage the survival of the least fit that modern populations contain an unfortunately high proportion of biological weaklings. More complex, if not more sophisticated, are those theories that are concerned with the long-run consequences of current controls over population growth. These theories are founded upon a superficial knowledge of the doctrine of biological evolution and hold that man's current interference with the processes of natural selection is beginning a reversal of the evolutionary history of man. Man, it is assumed, gradually became the dominant creature that he is because generation after generation, age after age, only the "best" of his numbers could survive hunger, disease, and the eternal competition with their fellows to reproduce their kind. Now that man is exercising control over his numbers, reducing competition for food and the other necessities of life, and protecting the "weak" from the diseases that in nature would eliminate them, the direction of evolutionary development will be toward increasingly fragile and biologically incompetent human beings. This general thesis takes two specific forms.

"*Race Suicide*."—Those who believe, or profess to believe, that peoples of western European stock—the "white race"—are innately superior to those with darker skins and different cultures find much cause for alarm in present differential rates of population growth. As has been indicated, the development of really effective controls of population numbers has so far been limited almost exclusively to Western societies.

Society and Mental Disease (Farrar, New York, 1938); S. A. Queen, "The Ecological Study of Mental Disorders" (*Amer. Sociol. Rev.*, vol. 5, pp. 201-209, 1940); C. W. Schroeder, "Mental Disorders in Cities" (*Amer. J. Sociol.*, vol. 48, pp. 40-47, 1942); and C. Tietze, P. Lemkau, and M. Cooper, "Schizophrenia, Manic-depressive Psychosis, and Socioeconomic Status" (*Amer. J. Sociol.*, vol. 47, pp. 167-175, 1941).

Asiatics, East Indians, and other non-Western peoples have not yet adopted contraceptive measures; and their birth rates are, by current Western standards, excessively high. As these peoples have come to profit somewhat from the introduction of Western technologies, their death rates have begun to fall slightly; and, as happens with any subsistence population that experiences an increase in material income, their numbers have begun to increase. At present, the rates of population increase among non-European peoples are therefore considerably higher than the rates of increase for peoples of European culture. If one assumes that the birth rates of European peoples will continue to decline in the future as they have during the past fifty years and that non-Europeans will continue to increase in numbers at the rates that they have during the same period, one can easily demonstrate that Western peoples will constitute but a small minority of the population of the world in another hundred years or so. And if one accepts the wholly untenable assumption that only peoples of European stock are biologically capable of maintaining Western civilization, one can then conclude that birth control is a form of race suicide; that the evolutionary process that has made the white race superior to all the other races has been reversed; and that, unless white peoples abandon their control over numbers, civilization will be overwhelmed by a "rising tide of color."¹

Eugenics.—Equally alarmist is the view that is taken by some regarding the differential rates of increase within Western populations. As has been shown, a rather close relationship exists between the standards of living of various groups within the population and their birth rates. The higher economic classes, better educated than the poorer classes, with more access to contraceptive devices and less encumbered by religious and superstitious preconceptions, are more inclined than the poorer classes to keep their numbers down. The birth rate of the poor is therefore considerably higher than that of the middle and upper classes. On the assumption that poverty is an indication of biological inferiority, the conclusion is drawn that the best biological stocks within our populations are dying out and the poorer stocks replacing them, so that there is occurring a steady decline of the "blood" of the nation. In this view, the superior stocks, represented by the upper classes within the population, were evolved under natural conditions, the fittest members of the group surviving and the incompetents being destroyed by their own incompetence. Birth control as now practiced is seen as a reversal of this process of natural selection, a reversal that, if continued, will return mankind to the poverty, ignorance, and primitive state from which biological evolution is assumed to have freed him.

¹ The latest version of this nonsense is I. Calvin's *The Lost White Race* (County-White, Brookline, Mass., 1944).

The foregoing thesis, ardently disseminated by various eugenic societies,¹ has played some part in retarding the spread and adoption of contraceptive techniques and has been the basis for a number of strange proposals. Some of these proposals have had as their objective the increasing of the birth rate of the "best stocks"—by which is meant the upper economic classes—either by denying them access to contraceptive devices or by educating the best people to their "responsibilities to the race." Other proposals have as their goal the lowering of the birth rate of the "inferior stocks" by mass sterilization of the poor, the uneducated, and the underprivileged. The eugenists would, in effect, apply modern techniques of stockbreeding to the social population. They completely ignore the fact that social not biological criteria determine who is "best" and that what mainly distinguishes man from the cow, the pig, and the horse is that he can and does develop and utilize a culture.

¹For the history of the American Eugenics Society, see F. Osborn, *Preface to Eugenics* (Harper, New York, 1940).

Part III

The Social Components: Their Nature and Functional Interdependence

Chapter VIII

STRUCTURAL DYNAMICS

THE analysis of society per se, which will be undertaken at this point, is complicated by the fact that society is process rather than thing. As was indicated in Chapter II, social process may be conceptually "frozen" and treated as structure. Seen thus, society consists of modes of individual action, patterns of human relationship, and complexes of social practices. Society will be so viewed and treated in the subsequent chapters of Part III.

Analysis of society in terms of structure is itself complicated, however, by the fact that in operation a society is an entity, an operating system, not an aggregation of parts. To separate a society into specific "parts" for purposes of description and analysis would, therefore, be much like trying to describe and analyze the life processes of the human being in terms of severed hands, heart, lungs, and so on. For since a society, like a living human being, is an operational whole, to separate it into parts is to destroy all that is sociologically significant. A heart is just dead tissue when it is detached from the body, and a social practice is just meaningless human action when it is described apart from the social system.

The Component Systems of Society.—It is quite impossible, however, to examine either a society or a human being in its entirety all at once. The physiologist starts with an over-all concept of the organism that he is investigating; but when he gets down to work, he begins at some point on the total organism and proceeds part by part with his examination. To do this without at the same time losing sight of the wholeness of that organism, he thinks and works in terms of physiological systems—the

respiratory system, the digestive system, the nervous system, and the circulatory system—each of which is made up of a group of interdependent parts that together operate to some special end.

A comparable procedure has developed for purposes of sociological description and analysis. In some of the initial attempts at analysis a society was compared rather directly with a living organism.¹ The parallel was then drawn between the circulatory system of the organism and the transportation system of a society, the neural system of the body and the communication system of a society, etc. As a means of stressing the interdependence of structural elements and the operational organization of those elements into systems, this organic analogy has considerable utility. But it can easily be pushed too far and, like any complex analogy, tends to be taken literally by literal-minded persons. A society may be in some limited respects comparable to an organism; but it is not an organism, and it does not operate in terms of the laws of organic life. The component systems of a society are not so clearly delimited as are those of an organism, nor does each of the physiological systems of the body have its social counterpart. In fact, neither the structure nor the operation of the component systems of a society is even suggested by physiological systems.

For purposes of analysis the total social structure that is a society can be conceptually dissected into technological, "mental," and organizational systems. The technological system comprises the various ways by which the members of the group adjust to nature, both physical and biological. The mental system consists of the knowledge and the ideological elements—the things that men believe, the ways in which they think, and their values and other symbolic constructs—of the society. The organizational system comprises the established relationships by means of which men work and live together.

Each of these major systems is composed of a number of minor systems, made up of a number of specific social practices. The social practice (or act, as it is sometimes called) is the smallest unit of sociological analysis, the smallest structural element. It is the sociological parallel to a culture trait, the minor systems thus being sociological parallels to trait complexes. In contemporary Western societies, for example, the ideological aspect of the mental system includes a considerable number of systems of beliefs, such as racism (a complex of beliefs regarding the divisibility of mankind into discrete biological categories), Christianity

¹ See, for example, C. H. Cooley, *Human Nature and the Social Order* (pp. 35-50, Scribner, New York, 1902). For an early attempt to break society down into its functional components, see C. R. Henderson, *Social Elements* (Scribner, New York, 1898).

(a complex of beliefs relative to a supernaturalistic being and an after-life), and capitalism (a complex of beliefs regarding the nature of society that are used in support of a particular system of economic organization). Similarly, the organizational system of Western societies includes to some extent such minor systems as the family, the church, and corporate business.

Interdependence of Component Systems.—Each of the three major systems is operationally dependent upon both of the others.¹ No matter how highly developed their techniques of food production, the members of a social group will starve unless they can and do work together harmoniously. Conversely, effective organization is not enough for group survival; the group must possess adequate techniques of food production as well as effective organization if it is to maintain itself. And even as the major component systems are interdependent, so, too, are the various social practices that go to make up a minor system and the various minor systems that go to make up a major system. In the following chapters each of the major systems and their dependent minor systems will be discussed one by one and each in relation to the others; but throughout the discussion it must be constantly borne in mind that no one of them ever operates as a discrete structural element.

Much use will be made in the following chapters of data drawn from the social history of contemporary Western societies. In the first place, most sociological investigation has been conducted by Westerners. Moreover, Westerners have been most successful when studying the Western societies with which they are most familiar. And, to be entirely realistic about it, analysis is being made by and for Westerners, who are inevitably more interested in their own than in any other society and more capable of understanding it. Analysis similar to that undertaken here could, however, be made for any society, past or present, were adequate data available.² For every social structure is made up of the same major component systems, and the interdependence of these systems one with the others and of the minor systems of which they are composed is a universal—a “law” of social life. The use of materials from recent Western experience may therefore be considered simply as illustrative of the structure and operation of society in general.

¹ The functional interdependence of the social components is most evident, perhaps, in the case of relatively simple social systems. Most of the recent over-all studies of primitive societies stress this interdependence (see Supplementary Bibliography 1). It is, for example, the central thesis of R. Redfield's *The Folk Culture of Yucatan* (University of Chicago Press, Chicago, 1941).

² For one such attempt, on a rather theoretical level, see F. J. Teggart, *Rome and China: A Study of Correlations in Historical Events* (University of California Press, Berkeley, 1939).

SOCIAL RELATIVISM

Many studies of social structure have been made by sociologists and anthropologists. In some of these studies the whole of a society as it exists at a given time is surveyed, and an attempt is made to record the various interdependent elements, component parts, and major systems of that society. An inclusive study of a primitive tribe or village or an American rural community, small town, or city would fall into this category. Before these studies become meaningful they must, however, be compared; and data derived from them must be correlated. In other studies some one structural element or some one major system is abstracted from the social whole for more rigorous and detailed examination. An opinionnaire survey of American racial attitudes or a study of the American class system would be of this type. Data from this type of study become meaningful only when the relations of the structural element to other structural elements are determined. Underlying both procedures by which data are rendered meaningful is the basic concept of social relativism.

Function vs. Form.—The concept of social relativism hinges upon the distinction between the form and the function of structural elements.¹ The importance of this distinction arises from the fact that similar functions may be accomplished by different practices and component systems, while the same practice or component system may function in different ways. The relation between form and function is not, that is to say, a constant one.

The distinction between form and function can be simply illustrated by the different greeting practices, elements of the organizational systems, that appear in different societies. In premodern China men greeted each other by bowing slightly and pressing the hands together; a century ago in Europe gentlemen lifted their hats to one another; in contemporary America they shake hands. In each instance the function of the structural element (the indication of friendliness) is the same, although the form (the specific action) is different.

It is evident that the function of any particular practice—bowing, hat lifting, or handshaking—depends entirely upon the context in which the practice appears and varies as the context varies. In contemporary America the handshake functions toward the establishment and maintenance of harmonious relations between men. In premodern China the same practice would no doubt have led to misunderstanding, embarrassment, and in

¹ The most explicit statement of this distinction is to be found in B. Malinowski, *The Dynamics of Culture Change* (Chap. IV, The Functional Theory of Culture, Yale University Press, New Haven, 1943). See also R. Benedict, *Patterns of Culture* (Houghton Mifflin, Boston, 1934); and B. Malinowski, *A Scientific Theory of Culture* (University of North Carolina Press, Chapel Hill, 1944).

some instances the prompt execution of the handshaker; no mandarin of China would have forgiven anyone, even a Westerner, for grasping his hand.

What is true of greeting practices is true of all social practices, whether they are technological procedures, social beliefs, or modes of organization. The practice is functionally important only in terms of the entire context in which it operates. As a consequence, the function of any structural element cannot be ascertained from its form. Even the most socially sanctified forms of organization—the patriarchal family, private property, and democracy, for example—have no functional significance in and of themselves.

Value Judgments.—The functional significance of a structural element rarely enters into the folk and philosophical evaluation of it. The thing is almost invariably judged apart from its context and in terms of its form, and the standard of judgment is invariably local and cultural. Thus the contemporary American would consider the bowing of the premodern Chinese and the hat lifting of the last-century European silly; they, in return, would have deemed the handshaking of the contemporary American an affront to human dignity.

The common procedure of evaluating all structural elements in terms of their forms is sociologically described as exercising a "value judgment," for it operates on the basis of fixed ideas of what is good form and evaluates all other forms accordingly.¹ Thus the judgment, common in America fifty years ago, that it was all right for men to smoke cigars or pipes but bad for them to smoke cigarettes (a view reflected in the then-current term "coffin nails") was a value judgment. Functionally, smoking has the same physiological effects, whatever the form of tobacco usage; but the members of a given society deem one form of usage good and another bad because they evaluate all practices, simple and complex, in terms of form.

Value judgments vary from society to society and from group to group within a society. Some contemporary societies judge democratic government good, whereas others judge it bad and dictatorship good.

¹ For another way of getting at the distinction involved here, see G. Lundberg, "Can Science Save Us?" (*Harper's Mag.*, vol. 191, pp. 525-531, 1945).

Not all social scientists have as yet been able to disentangle their role as amoral students of society from their role as moralizing members of a specific society. For various views regarding "values" in sociological study, see F. H. Blum, "Max Weber's Postulate of 'Freedom' from Value Judgments" (*Amer. J. Sociol.*, vol. 50, pp. 46-52, 1944); C. C. Bowman, "Evaluations and Values Consistent with the Scientific Study of Society" (*Amer. Sociol. Rev.*, vol. 8, pp. 306-311, 1943); J. M. Gillette, "An Examination of Criteria for the Determination of Normal Society" (*Amer. Sociol. Rev.*, vol. 2, pp. 501-507, 1937); R. Lepley, *Verifiability of Value* (Columbia University Press, New York, 1943); and M. Tumin, "Culture, Genuine and Spurious: A Re-evaluation" (*Amer. Sociol. Rev.*, vol. 10, pp. 199-207, 1945).

Certain groups within contemporary American society judge trade-unionism good and industrial unionism bad; some judge the "family" farm good and the large corporate farm bad; almost all Americans will adjudge divorce, prostitution, big business, graft, and a thousand and one other social activities as evils, while they adjudge a thousand and one other activities, such as going to church, as virtues.

Value judgments are the stock in trade of editorial writers, moralists, politicians, and social reformers. And it is largely because most reformistic social action, legislative and otherwise, is taken in terms of social forms rather than social functions that reform measures so often produce entirely different results from those that were expected of them. The early Christian missionaries to the South Seas, for example, induced the natives to adopt the practice of wearing clothing in the expectation that this practice would elevate the sex morality of those primitives. But the consequences were quite the opposite. The practice of wearing clothing may perhaps be a factor in maintaining Western sex mores; at any event, nudity is somewhat associated with sex license in the West. But to the South Sea primitives who were accustomed to nudity, clothing the body was an excitement to sexual desire. In an endeavor to do away with the "evil" of prostitution moralistic interests have from time to time instituted laws against the operation of brothels. But even where such laws have been enforced, organized prostitution has not diminished; it has simply taken another form, such as that of the "call house," and continued to operate.

Function Judgments.—The physical and biological sciences very early began to discard the application of value judgments to the physical and biological phenomena that they investigated; and until they did so, they were considerably less than scientific; for their folk views (such, for example, as that wolves are evil, while lambs are good) kept interfering with their search for facts. For a considerable time, however, sociologists and anthropologists were inclined to examine social practices out of the context in which they operated, with the result that they became pre-occupied with forms and tended to judge structural elements with no more detachment or objectivity than does the layman. Thus Westermarck, who has previously been mentioned, compared the marriage customs of a great many peoples without reference to the total social structures in which each one of these customs actually operated. Frazer did much the same thing with the magical rituals of primitive peoples, even as did Lévy-Bruhl in his study of primitive thought processes.¹ In these

¹ J. G. Frazer, *The Golden Bough* (3d ed., 12 vols., Constable, London, 1907-1915); L. Lévy-Bruhl, *Primitive Mentality* (trans. by L. A. Clare, Macmillan, New York, 1923).

and countless other comparative studies the function of what was being examined was entirely lost sight of.

Today, sociologists and anthropologists regard the value judgments of a people as social data—elements of the ideological system of the society—which, as such, are subject to scientific study but are not to be used as tools for study. Present sociological investigators assess structural elements not in terms of good or bad but in terms of their functional effectiveness in their particular social contexts. They apply to each element what might thus be called a “function judgment.” To the physiologist the question of whether a large heart is better than a small one is entirely meaningless. A heart is functionally significant only in terms of its operation in the body; thus the “value” of a large heart depends upon the size and other characteristics of the body of which it is an integral part. Likewise the functional effectiveness of any structural element depends upon the character of the other parts of the social system; and the question of whether landlordism or communalism is better (or monogamy or polygamy, capitalism or socialism, classical music or popular music, Christianity or Islam) is sociologically meaningless. Under some conditions landlordism has functioned quite effectively; under others it has led to a withdrawal of land from use and has discouraged the application of the best techniques of cultivation. The functional effectiveness of any structural element is, therefore, relative rather than absolute.

The Search for Social Certainty.—Most social philosophers have concerned themselves with a search for social absolutes. One phase of this endeavor has been the attempt to establish a fixed point of reference from which all else may be evaluated—a final authority, a law of life, or a universal truth. The medieval scholastics, who argued valiantly in behalf of the religious forms of the Middle Ages, measured all things in terms of the dogmas of the Church. As a part of the claim that the Church was the highest authority on earth, the scholastics settled on Rome, the home of the Church, as the center of the universe. In accordance with this fiction, the medieval cosmic philosophers related the position and movement of all the heavenly bodies to the “fixed” earth. But in time the growing science of astronomy demonstrated that Rome was not the fixed physical center of the earth and that the earth was not the fixed center of the universe. What astronomy did for the universe, the other physical sciences have done for other fixed points of physical reference. Even time, it seems, is relative. And matter, it is certain, is not stable.

Social changes eventually eroded away the authority of the medieval Church, and its dogmas ceased to be acceptable points of reference for the evaluation of social forms. Since then much of social philosophy has been an endeavor to provide other fixed points of social reference to

replace those of the medieval scholastics, an endeavor that has lately been described as the "search for social certainty."

One of the popular and respected of the current versions is ethics, frequently misdefined as the "science" of moral conduct. Every people has its standards of conduct, its concepts of morality, and its ethical principles; and these have been subjected to sociological examination. Under such examination, the functional value of any moral or ethical principle, like that of any other kind of structural element, is found to be relative to the social context. But the philosophers have endeavored to find a "universal ethic"—a principle or a set of principles of conduct that are good for all people at all times. From this ethical point of reference, all modes of social conduct are then given an absolute rather than a relative value.

The ethic that the philosopher finds to be "universal" invariably turns out to be a particular set of social practices, usually and characteristically those of the philosopher's own society or of the class within the society that he represents. To Aristotle, for example, slavery, current in Athens during his day, was ethical; to most modern philosophers it is unethical. To Confucius, filial loyalty was the highest ethical principle, and upon it depended the maintenance of Chinese society; to Hu-Shih, more than two thousand years later, filial loyalty was the curse of Chinese society, and individual freedom was the primary ethical dictate. To Nietzsche and many other German philosophers, physical courage and brute force were the highest ethical qualities; to most English and American philosophers these have been the attributes of the unethical beast.

What varies so much from philosopher to philosopher and from society to society and from time to time can hardly be considered a fixed point of reference for the study of society. There are, in fact, no fixed points of reference for the study of social or for any other kind of phenomena. All the sciences, from physics to sociology, deal in relatives rather than absolutes.

THE CONCEPT OF EQUILIBRIUM AND DISEQUILIBRIUM

The concept of social relativism provides no fixed point of reference, but it does make possible the examination of the operation of a given structural element within a given context and a nonmoralistic appraisal of the extent to which that element fulfills the function that the members of the society expect of it, whatever that expectation may be.¹ As a scale

¹ Sociology does not attempt to establish what the members of society should want; at the most an attempt is made to ascertain what they do want.

Of most societies it can be said that the members collectively "want to survive," *i.e.*, that social systems tend to be self-perpetuating. But within this generalization almost nothing is true of all societies. Some want war, some peace. Some want a high level of material well-being, others are content with perpetual poverty.

or standard by which to measure the functional effectiveness of structural elements within their social contexts, a number of concepts have been borrowed from the science of physics. The key concept is that of equilibrium, a balance of divergent forces. The dependent concept is that of forces in a state of disequilibrium, *i.e.*, out of balance. In sociological usage reference is made, of course, not to physical forces but to the functional balance, or lack of it, that exists between the various structural elements of a component system or between the various component systems of the entire social structure.

Equilibrium an Ideal Construct.—The concept of a society in which each structural element is functionally equilibrated with all the others is purely theoretical. In that society, each of the many factors external to the social structure and within it would be held constant by the operation of the others. Every slightest variation in one factor—a change in the food supply, a change in the birth or death rates, or an increase in the number of errant husbands—would be promptly offset by a change in other factors. One excessive birth would thus be canceled out by one excessive death; one overly ambitious individual would be offset either by one underly ambitious individual or by effective social restraints upon the overly ambitious one, etc. Such a society would be stable. The population numbers, the sex and age distributions, the health level, and the material production would not change through time. And its structural elements, its techniques, beliefs, and organization, would change only to the extent necessary to cancel out some antecedent change.

All social systems are actually in a constant state of disequilibrium; but the concept of social equilibrium does serve as a standard by which to measure the extent to which a given structural element or an entire social structure falls short of the functional possibilities. The concept is, therefore, comparable to the physiologist's idea of a perfectly functioning organism, one that would never grow older and would never die. Actually, all organisms are continually being thrown out of balance by their external environment (suffering invasion by bacteria, getting hungry, cold, dry, hot, etc.) and getting out of adjustment internally (the leg muscles becoming fatigued while the arms are still fresh, the lungs supplying less oxygen than the blood requires, etc.). Moreover, all organisms wear out as they age and eventually die. Perfect organic functioning is, therefore, only an ideal from which to measure the degree of imperfection that is the invariable lot of all organisms.

The concept of the perfectly functioning organism represents the ideal condition toward which organisms normally tend. The organism that is thrown out of balance attempts to establish an organic equilibrium. When excessive activity reduces the oxygen supply of the blood, the heart normally pumps harder, the lungs breathe deeper, etc., until a

better equilibrium is achieved; when bacteria invade the body, the white blood corpuscles endeavor to eliminate this disturber of equilibrium. Likewise the concept of the stable society represents the ideal toward which societies tend. The processes of social adaptation are not at all comparable to those of organic adaptation; but in each instance the direction of change is toward equilibrium.¹ Thus should soil erosion reduce the food production of a social group, there will normally appear new forms of social endeavor—analogueous to the random movements of the hungry infant or the more systematic endeavors of the hungry animal—directed toward the revival of normal productivity. Should there occur a loss of faith in the traditional gods, new gods will ordinarily be invented. Should changing circumstances make the continuance of the large-family system of organization impossible, a new and smaller unit of family life will probably evolve.

The tendency for societies to move toward a state of functional equilibrium is the corrective for the fact that any change disturbs the functional effectiveness of the existing social structure. As a consequence, adaptive changes may bring a better equilibrium within one component system and at the same time inadvertently increase the disequilibrium of the whole society. There is, moreover, between societies and within a given society at different periods something analogueous to varying degrees of organic health. One society may be more nearly equilibrated than another, not because its structure includes some specific social practices or component systems but because its various practices and component systems, whatever they may be, function better together than do those of another society.

Disequilibrium.—In the preceding four chapters the factors external to the social system itself—the culture, the physical and biological habitats, the population numbers and composition—were examined in detail. The specific nature of these factors determines the particular conditions that must be met by the social structure if the group is to survive. They are to the social structure as the wind and the rain and other external circumstances are to the organism. And, as was indicated, these factors are anything but constant; they vary, both as a consequence of forces beyond the control of men and also as a consequence of the actions of men.

In the not-so-distant past, changes in one or a number of the factors external to the social structure were an important source of social dis-

¹ For attempts to deal more or less scientifically with this tendency, see F. S. Chapin, *Cultural Change* (Century, New York, 1928); J. O. Hertzler, *Social Progress: A Theoretical Survey and Analysis* (Appleton-Century, New York, 1928); and N. L. Sims, *The Problem of Social Change* (Crowell, New York, 1939).

equilibrium, if not the primary one. In a premodern society so small a change in the external conditions as, say, an increase in the number of field mice, might conceivably disturb the functional effectiveness of much of the social structure. Suppose, for example, that under the traditional forms of property ownership the peasant farmer made his payment to the landlord in a fixed measure of produce. An increase in the number of field mice that reduced the productivity of the fields would then disturb the functional equilibrium that had existed within the landlord-peasant system; for although the peasant would have less food for his family, the landlord would suffer not at all. Until harvests returned to normal or some modification was worked out in the traditional system of payments to the landlord, the peasant would be underfed and disgruntled, his efficiency as a farmer would diminish, and the spread between the wealth of the landlord and the poverty of the peasant would continually grow greater. The fixed-payment practice was actually followed for a time by the English landlords of Ireland, although in most instances where a landlord-peasant system has been in operation, the share system, which provides a sort of automatic adjustment to changes in crop production, has been traditional.

Social Lag.—Modern societies provide elaborate and relatively effective checks or counterbalances to changes in the physical and biological habitats. With minor exceptions, all modern societies are technologically capable of maintaining an equilibrium between the social structure and natural factors, such as climate, resources, the various elements of the biological habitat, and, as has been indicated, even population numbers. If mice invade the field of a modern farmer, he poisons them; if his fields grow infertile, he has the soil analyzed and applies the proper correctives; if bacteria invade his fields, his barn, or his household, he calls in the county agent, a veterinarian, or a physician. Any failure by a modern society to make quick and effective adaptations to changes in the natural conditions that affect it generally are not from technical inability to do so but from rigidity of the ideological or organizational systems.

The failure of one part of a social structure to keep up with changes that occur in another interdependent part is usually described as a social lag.¹ Historically, the lags that have appeared in our own society during the past few hundred years have generally been between a rapidly ad-

¹ The term was introduced into sociological literature by W. F. Ogburn (*Social Change*, Viking, New York, 1922), but the underlying concept is by no means new. It appears, for example, in doctrinal form in the writings of Karl Marx. See J. H. Mueller, "Present Status of the Cultural Lag Hypothesis" (*Amer. Sociol. Rev.*, vol. 3, pp. 320-327, 1938).

vancing technology and old elements of belief and organization. There is no reason to suppose that this historical tendency in Western societies reflects a universal law of social life; in fact, even in our own social history changes have in many specific instances occurred more rapidly in one phase of ideology or organization than in the material technology. Of late, however, Western peoples have demonstrated much greater ability and willingness to change their methods of cultivating the soil than their methods of owning and controlling its use, to change their habitations than the kind of life they lead within them, to change their methods of fabricating goods than their methods of working together, and to change their methods of warfare than the forms of political organization that make for recurrent wars.

In a sense, modern societies suffer from too little rather than, as some philosophers maintain, too much change. Some would, for example, trace the current plight of the tenant farmers of the South to the technological and market changes (including the development of methods of obtaining cellulose for rayon from wood rather than, as was the initial practice, from cotton linters) that have reduced the proportionate demand for cotton fibers. But it is much more realistic to trace the present plight of the Southern cotton producers to the antiquated land-use system under which they operate, to their archaic and uneconomic methods of cultivation, and to their unwillingness to engage in diversified farming.¹ Likewise, it is not, as so many believe, the recently developed atomic bomb that threatens the future of civilization; it is, rather, the eighteenth-century system of nationalism (a complex of beliefs and forms of political organization) that, in view of the existence of the atomic bomb, poses this threat.

Dynamic Disequilibrium.—So far in modern Western societies, the tendency for some component elements of a changing social structure to lag behind others has been partly offset by the tendency, previously discussed, of societies to move toward an equilibrium. The resulting state is one of dynamic disequilibrium, for the various elements of the disequilibrated structure are changing. In our own historical experience what has been happening is that changes in one of the component systems, characteristically the technology, have brought about an increasing disequilibrium within the whole structure; the related systems have in most instances adapted slowly, in the direction of establishing an equilibrium; but before a new equilibrium could be achieved, further disequilibrium has been brought about either by an extension of the original changes or by the fact that the changes in the lagging compo-

¹ As does P. F. Drucker in "Exit King Cotton" (*Harper's Magazine*, vol. 192, pp. 473-480, 1946).

nents produced new kinds of disequilibrium, even as they reduced old kinds.¹

Dynamic disequilibrium is roughly analogous to the condition of a building that is continually becoming outmoded but is also continually, if belatedly, being rebuilt. The rebuilding is, however, undertaken on a piecemeal basis; and by the time that the plumbing is modernized, the lighting and heating equipments have become further out of date; by the time that the latest in heating equipment has been installed, the plumbing has become antiquated and the roof has fallen into disrepair. Thus in Western societies the introduction of the factory system of goods fabrication threw out of balance the entire system of class organization, the existing forms of work organization, and many other elements of pre-industrial society. During the course of a hundred years many organizational and ideological adaptations to the factory method of production were worked out. Trade-unions were one of the new organizational forms. But long before the trade-union form was perfected, continuing changes in the methods of production began to outmode that form of organization. The industrial union, a new form of labor organization more in keeping with the newer forms of production, then began to appear; but since trade-unions have persisted, the consequence has been more rather than less disequilibrium. And, no doubt, long before the industrial type of union organization completely supplants the trade-union form, changes in other aspects of our society will render the industrial union obsolete.

Static Disequilibrium.—The condition of dynamic disequilibrium is produced by disproportionate rates of change in various elements of the functionally interdependent component systems of a changing social structure. Such disequilibrium may be progressive in that it may grow more rather than less acute in the course of time. But as long as the lagging elements do change in the direction of equilibrium, there remains the prospect that ultimately the trend toward equilibrium will catch up with the trend toward increasing disequilibrium and the social structure will approach stability. When, however, malfunctioning structural elements are for whatever reasons preserved more or less intact, the resulting disequilibrium is static rather than dynamic; for the society, or that aspect of the society that is involved, is unadaptive.

By rough analogy, again, a society in a state of static disequilibrium is somewhat comparable to a building that is continually growing more outmoded but is never being repaired or modernized. In time such a building not only becomes obsolete in all its parts but uninhabitable. Historically, many societies have followed a somewhat comparable

¹For some current illustrative material, see W. F. Ogburn, "Our Times" (*Amer. J. Sociol.*, vol. 47, pp. 803-815, 1942).

course. They were subjected to change, external or internal, but failed to make any significant adaptations to that change, with the consequence that the whole social structure became less and less capable of maintaining the members of the social group, who thereupon diminished in numbers or were conquered and subordinated by the members of some more dynamic society.¹ Something of this sort happened, apparently, to the once-great civilizations of Egypt and Mesopotamia and subsequently to the Greek city-states and the Roman Empire. Currently, East Indian society would appear to be in a state of static disequilibrium, for the incredibly complex and variegated structural elements of that society have so far displayed little tendency to adapt to the acute disequilibrium that has followed the introduction of Western technologies and the changing relations of India to the rest of the world. Chinese society, by contrast, has shown a high degree of adaptability in the present era as in the past; and its current state of disequilibrium is dynamic rather than static.

At any moment some elements of a given social structure may be in a condition of more or less static disequilibrium, while others are in more or less dynamic disequilibrium. Moreover, a condition of static disequilibrium may become dynamic or vice versa. During recent centuries the urban aspect of Western societies has, for example, been in general more dynamic—"progressive," is the lay term—than the rural aspect, which has at times and in some places been markedly static. Thus although the rural South has been in a condition of extreme disequilibrium at least since the time of the Civil War, it has clung tenaciously to its many functionally antiquated techniques, ideologies, and forms of organization. In many areas of western and central Europe, quasifeudal landownership and land-usage practices have persisted in an otherwise dynamic social setting; and it remains to be seen whether the repercussions of the latest war have, as is claimed, uprooted those practices and introduced a period of adaptive change, even as the Russian revolution shook Russian society from its bondage to feudalism and produced a condition of dynamic disequilibrium.

Organization vs. Disorganization.—The concept of functional equilibrium and disequilibrium is implicit in most current sociological description and analysis. When attention is centered primarily upon the organizational system of a society, it is the common practice to indicate a marked degree of functional disequilibrium by the term "disorganization," e.g., disorganization of the modern family. Implicitly, if not explicitly,

¹ This is apparently what happened to Aztec society, for it is now clear that the Aztec people were literally destroying themselves at the time that the Spanish, generally blamed for the Aztec destruction, came along. See G. C. Vaillant, *Aztecs of Mexico* (Doubleday, Garden City, 1941).

"organization" is taken to indicate a high degree of functional equilibrium. Since the term "disorganization" points specifically to disequilibrium within the organizational aspect of the social structure and since it is briefer than the more descriptive phrase "functional disequilibrium of this or that element of organization," it will be used by preference whenever occasion arises in subsequent discussion.

TYPES OF SOCIAL STRUCTURES

Subsidiary to the concept of functional equilibrium and disequilibrium are a considerable number of sociological categories that have developed to facilitate description and analysis. Which of these categories is employed depends upon what aspect of society is under consideration and what is to be stressed. None of these categories or the terms applied to them are mutually exclusive. The most commonly used are those that represent extreme types of social structures.

Primary vs. Secondary Modes of Association.—As was indicated in Chapter II, forms of group life are infinitely varied and are all subject to change through time. The family life of the Zulu has slight structural resemblance to the family life of the American, and the organization and activities of the United States Chamber of Commerce are radically different from those of the American Association of University Professors. But all forms of human association, whatever the number of persons involved and whatever the pattern of their relationships, are more or less clearly divisible, in terms of the means by which the members interact, into two types, each of which has certain fairly common characteristics.¹

Primary associations (alternative terms, with slightly different connotations, are "folk" groups, "community," and *Gemeinschaft*) are those in which the members meet face to face and communicate directly by speech and gesture. Characteristically, such associations are traditional in character and arise directly from cultural imperatives, as do those of the family, the clan, the tribe, etc., or indirectly from conditions established by the culture, as do those of the community of villagers who, since they live side by side, must associate with one another. Ordinarily, primary associations are enduring. The members meet again and again, and their relationships tend therefore to be intimate and sympathetic in quality. When the patterns of relationship are not culturally designated but meetings of the members are recurrent, as is the case with neighbors

¹ This distinction has been made much of by the German historical school of sociology. It is used in one way or another by most American sociologists and is the central theme of some. See, for example, C. H. Cooley, *Social Organization* (Scribner, New York, 1924); R. M. MacIver, *Society: Its Structure and Changes* (Long and Smith, New York, 1931); and R. C. Angell, *The Integration of American Society* (McGraw-Hill, New York, 1941).

who live side by side for years, there tend to develop more or less standardized forms of interaction, with a consequent elimination of trial and error.

Not all face-to-face groups are enduring and highly organized. People may meet on jungle path, on city street, or as traveling companions in stagecoach, train, or airplane and, having worked out a relationship appropriate to the circumstance, separate and never meet again. The more enduring associations that have arisen within societies past and present do, however, seem to have been of the face-to-face type; and it is assumed by many sociologists that a high degree of social equilibrium is possible only in societies that operate largely through groups that are primary in type.

The corollary assumption, substantiated by much historical evidence, is that the growth of dynamic disequilibrium normally involves a decline in the integrity and importance of primary-group associations and the rise of a wide variety of secondary associations (alternative terms for which are "derived," "state," and *Gesellschaft*). The secondary type of association is one that is formed more or less deliberately and in terms of common interests in the achievement of some recognized goal; the members need not, and in the modern world often do not, meet face to face but may communicate by such indirect means as the written word. The relations of the members of secondary groups are limited in scope and arrived at by much trial and error and in terms of the self-interest calculations of the members. Such groups tend, therefore, to disband and reform from time to time. As a consequence each such association is more temporary than enduring.

In the modern world the more characteristic secondary associations are audiences, publics, clubs, and the various political, business, pressure-group, and other associations through which the modern individual expresses and occasionally satisfies his special interests. The recent development of new means of communication and transportation, subjects that will be treated at length later, has historically made possible the multiplication of associations of this type. It does not, however, follow that the growth in secondary-type associations has been the cause of the disequilibrium of modern societies. On the contrary, secondary associations seem to be a random and yet in the long run fairly effective means of working out substitutes for primary groups that have been rendered obsolete by technological or other changes.

Sacred vs. Secular.—The degree of reverence with which people view their social practices varies from instance to instance, from society to society, and from time to time. Few peoples have ever believed it a moral or natural law that they wear a hat of a certain kind and that if they should fail to do so they would be struck dead, go to hell in due

course of events, or bring calamity upon the heads of their fellow citizens. All peoples have, however, considered that some or many of their social practices, both technological and organizational, must be adhered to or some sort of disaster, personal or collective, would follow. These practices are for them sacred, hence, inviolable.

When a considerable proportion of the structural elements of which the social system is composed are held inviolable, the society is described as sacred in type. The antithesis, a "secular" society, is one in which the members are governed by utilitarian considerations rather than by reverence for traditional practices.¹ The distinction between sacred and secular, like that between equilibrium and disequilibrium, is, of course, one of degree. The members of no society think and behave exclusively in terms of traditional patterns or exclusively in terms of utilitarian considerations. Some societies tend, rather, to be intensely reverent toward a larger proportion of the elements of their social structure than do other societies, and within any given society the intensity of reverence and the proportion of elements revered may change considerably through time.

Differences in the degree of reverence accorded a practice may be simply illustrated by vegetarianism. Many peoples adhere to this mode or form of securing nourishment directly from vegetable organisms rather than indirectly via animals that eat the vegetable matter. All those who adhere to vegetarianism do not, however, view it in the same light. To the Bengali Hindus vegetarianism is a sacred and inviolable practice. The Bengali Hindus will, therefore, and often do, die of starvation rather than touch meat. The convictions of many other vegetarians, on the other hand, would not stand the test of hunger; certainly there are few Americans who, whatever their professed beliefs about food, would starve to death rather than eat meat. To them, vegetarianism is a practice that may be tempered by expediency.

Sacred-type Attributes.—Theoretically, a society in a state of equilibrium is moderately but not extremely sacred in type. The more vital of the structural elements are so much revered that they are normally adhered to generation after generation and are not abandoned simply because maintaining them is inconvenient or demands sacrifice on the part of the individual members of the group. For the society to remain equilibrated, those structural elements must, however, be plastic rather than rigid, otherwise any malfunctioning that arises will be perpetuated rather than corrected. Such a nicety of balance between sacred reverence for structural elements and willingness to modify those elements when the functional necessity arises is a theoretical possibility rather than an

¹ For the history of these concepts, see H. E. Barnes, H. Becker, and F. B. Becker, *Contemporary Social Theory* (Chaps. 3 and 23, Appleton-Century, New York, 1940).

actuality. Men are everywhere and always inclined to think in terms of absolutes, of good and bad, rather than of varying degrees of goodness and badness. And since their concern is with forms rather than functions, they apply value judgments to their structural elements. If a practice is deemed good, it is all good and inviolable. If the practice is deemed bad, it is all bad and to be abandoned *in toto*. For this reason, if no other, few societies approach equilibrium or remain stable for long.

A sacred-type society—assuming that the social structure became functionally effective before the structural elements acquired sacredness—will continue in a state of equilibrium only as long as no external or internal changes affect its operation. Any such changes would throw it functionally off balance and into a condition of static disequilibrium. Something of this sort has happened to East Indian society; its structural elements, presumably once functionally effective, have been rendered obsolete by changes both within and external to the social structure; but since the peoples of India hold inviolable a great many of their traditional structural elements, both technological and organizational, there has been little tendency to modify these elements in the direction of functional effectiveness. The political and economic decline of Spanish society can likewise be traced to the reverence with which the Spanish people, encouraged by the Church and coerced by their government, have clung to postmedieval structural elements. The general character of all sacred societies may be suggested by the statement that the members are ruled by religious precepts and guided by tradition and live in terms of the past.

Secular-type Attributes.—Secularization involves a loosening of the bonds of tradition, a partial release of men's minds from the established system of beliefs, and the provision of social incentives and opportunities for invention and discovery. Secularization comes about as a consequence of marked social disequilibrium, induced by changes either external to or within the social system or both. That disequilibrium tends to lessen the effectiveness with which the society socializes its incoming members and to teach the mature members, from their adverse experiences, that the cultural precepts and practices do not always lead to the results expected of them.

The process of secularization, by which a people who hold their structural elements in reverence come slowly to distrust those elements, is exceedingly complex. Social disequilibrium does not automatically produce secularization. As was indicated above, some societies remain sacred in type although many elements of the social structures are obsolete. Whether a society under duress will tend toward secularization or not depends, apparently, in part upon the character of the society itself. The Chinese people have recently shown a considerable willingness to

modify their technology, their ideologies, and their organization, while the peoples of India under roughly similar conditions have clung tenaciously to age-old practices. The Jewish immigrants to America have generally become unorthodox and highly Americanized in a generation or two, while the Amish Mennonites have for generation after generation stubbornly refused to adopt American ways.

A highly secularized society is above all dynamic, and change is in a sense the normal rather than the abnormal. In contrast to the members of a sacred society, those of a secular one tend to be ruled by law and governed by expediency and to live in terms of the present rather than the past. Since law is clearly a man-made thing, it is more readily changed than are the moral and religious precepts that come out of the past. Lawyers, judges, and the other functionaries of a legal system may be inclined to develop pseudoreligious reverence for established law and to become a sort of legal priesthood dedicated to the preservation of the *status quo*. Political regulations have, however, been historically much more flexible than have religious precepts.

Membership in a secular-type society is rather loosely defined. Thus while one must be born into Amish society, almost anyone can become a citizen of New York State. Because membership is loosely defined, people from many diverse cultural sources may gravitate into a secular-type society, as they did into Athens and Rome and as they have done in all Western societies during the modern period. These incoming members contribute to the dynamic quality of secular societies both because they do not hold the structural elements of their adopted society in reverence and because they bring with them "foreign" elements that may be borrowed by the native population.

The cosmopolitan character of the population of a secular-type society is further increased by the fact that such a society does not socialize its members by birth so effectively as does a society of the sacred type. The members of a secular society have, therefore, considerable individuality and display a high level of initiative. Initiative is not discouraged by a rigid class structure, as it is in a sacred society. The membership of the various classes, like the membership of the whole society, is loosely defined; and the man born of humble parents can through industry and craft rise to higher station, displacing as he does someone born to that position. Mobility of persons up and down the class hierarchy of itself helps to keep the social structure dynamic, for the traditional members of the upper class are in constant danger of being pushed out by "new blood" from below. Should they go to seed, they will be displaced and replaced by men of initiative.

No society is, of course, entirely secular. The Romans had so little respect for their traditional gods that they bought and sold foreign ones

in the market place; at the same time they clung with fatal consequences to the idea of maintaining themselves by parasitic plunder of their empire and to other ideas and practices that became outmoded with time. To the extent that a society is secular in type it does, however, tend to undergo rapid structural adaptations to conditions of internal disequilibrium. But it also contains within itself many forces, such as those manifest through individual members as hypermotivation, that tend to increase as well as reduce disequilibrium. Hence in theory there is no possible end to the changes that go on in a secular society—no end to the making and unmaking of laws, no end to invention and discovery, no end to the organization and reorganization of social life, no end to a condition of dynamic disequilibrium. When change does cease, such a society, again in theory, either becomes sacred in type or disappears.

THEORIES OF SOCIAL CHANGE

All modern societies are disorganized and increasingly secular in character. The process of secularization has been going on in the Western world for well over five hundred years, and Western influences have been disturbing the functional equilibrium of all the societies of the world. At the moment there seems to be no possible end to change. Those who like to think in terms of the long run—a thousand or ten thousand years—are curious to know where all this change is leading. Fifty and more years ago those who thought about the matter at all were generally of the belief that modern societies were moving steadily toward some sort of social perfection, and there was much talk about progress and its inevitability. Comte, it will be recalled, believed in the perfectibility of society, although he considered that perfection was something that men would have to work toward via science. Marx advanced the thesis that progress, as he defined it, was a law of society; nothing could prevent the coming of that industrial utopia in which all men would share and share alike and would therefore be content. In those days the idea of progress was in the air, and progress was regarded as a cultural compulsion.

Of recent years the mood of social philosophers has changed, as the moods of men do change through time and with varying experiences. It has become somewhat the fashion today among social philosophers to write off modern civilization as a failure or as an experiment doomed to failure. The more serious of these attempts to foresee, however darkly, where modern societies are going have involved the erection of highly speculative theories of long-run social change.

The Social Life Cycle.—One such theory, exemplified by Spengler's *The Decline of the West*,¹ holds that a society has a predetermined life

¹ Translated by C. F. Atkinson (2 vols., Knopf, New York, 1926, 1928).

cycle comparable to that of an organism.¹ Thus the society is born, grows more or less rapidly to maturity, and then enters a period of gradual and inevitable decline. The latter phase of the social life cycle, which modern Western societies are presumed to be entering, is one of extreme and increasing disorganization. In this theory, dynamic disequilibrium is analogous to the organic malfunctioning that is characteristic of organisms toward the end of their lives; it is a sort of disintegrating process, accompanied by ever-increasing secularization and a wanton and finally fatal disregard by the members of the declining society for their cultural heritage.

Cited as evidence to support the social life-cycle theory are the social histories of Greece and Rome. Ignored are such contrary evidences as the social histories of the peoples of China and India, and some lesser peoples, who have had continuous histories of thousands of years and are even now growing rather than diminishing in numbers. It is certainly true that many societies have come and gone over the ages; but it is not true that societies inevitably grow old and decadent and die. Many have done so but all have not.

The Cyclical Theory.—Another theory holds that societies, rather than going through a terminal cycle of change, go through a continuous cycle, analogous to the cycle of the seasons.² Social history, in this view, goes around and around. The "summer" of this historical cycle is usually described in terms of a sacred-type society in a state of stable equilibrium. In this ideal season, life is calm and peaceful and men go about their affairs assured that what they do is right and that tomorrow will present no new and unsolvable problems—no wars, no class or other conflicts, no hunger, and no fear. But in time the evil of change seeps into the social system; men begin to lose faith in traditional practices and to tinker with them, disorganizing the social structure by technological or other innovations. Finally all is change and nothing is stable. The society is now secular in type and in a state of marked disequilibrium. In the deep of this "winter" season life is debased; men concentrate upon the pleasures of the day and of the flesh, and there are no higher values. Then in due course the winter passes and the first signs of spring appear in the form of a revival of the ancient faiths and virtues. Gross materialism slowly gives way to a reborn idealism; men rediscover the values of their social past; and, again in due course, the society passes into another "summer" phase.

The cyclical theory of social history is implicit in the writings and preachings of most of those of today who decry modern society and

¹ For another version of the life-cycle theory, see A. J. Toynbee, *A Study of History* (6 vols., Oxford University Press, London, 1934, 1939).

² The most recent version of this theory is contained in P. Sorokin, *Social and Cultural Dynamics* (4 vols., American Book, New York, 1937, 1941).

THE SOCIAL COMPONENTS

plead for a return to the "perfection" of times past, specifically the Middle Ages. It is implicit also in the writings of those who glorify the presumed joys of life in primitive societies.¹ And those who have attempted to demonstrate the validity of the theory have in fact used either medieval European society or primitive societies to illustrate the "summer" phase of the historical cycle. The antithesis is usually illustrated by contemporary Western societies with, perhaps, some side glances at Athens at the time of Alexander the Great and Rome at the time of Nero.

The first error in all such theorizing is the assumption that a sacred-type society is necessarily a stable one. The second and dependent error is the assumption that, because traditional structural elements were held in religious reverence by the peoples of medieval Europe (and are, to a degree, so held by most primitives), those forms were functionally effective. As was mentioned in a previous connection, the society of the Middle Ages was not one of peace, plenty, and contentment; nor have primitive peoples led the happy and comfortable existence imputed to them by anthropological romanticists. Only the dimming effects of time have made the society of medieval Europe seem to some frightened moderns a blissful one, and only distance makes the life of the simple primitive appear both simple and untroubled.

Science and Theory.—Theories that are derived from the existing body of factual evidences play an important role in the development of any science. But social theories of the foregoing sort so far transcend, and so often violate, the known facts about social change that they have no sociological significance. They are philosophical doctrines, spun from the whole cloth, however heavily documented and illustrated by distorted historical evidences. The bald fact is that the present state of sociological knowledge does not warrant the construction of theories regarding the long-run trend or character of social changes. Whether contemporary civilization is headed for the scrap heap via internal disintegration or atomic fission or is destined to be replaced by some simpler, stabler, and more idealistic system of social life cannot be predicted on other than grounds of faith. Such factual evidence as is now at hand indicates only that, whatever direction the social future takes, that direction will be determined by man himself.

¹For one such glorification of a primitive society, see M. Mead, *Coming of Age in Samoa* (Morrow, New York, 1937).

ical habitats, how much and what kinds of usable things men can secure from nature and the extent to which they can avoid the hazards of nature. The techniques of communication and transportation limit the scope, and to a considerable extent the character, of the organizations that men can develop—they determine how far men can range in search of food and other materials, how elaborate their division of productive labors can be, how many men can live together in a compact group, and how well men can insure themselves against the effects of time. Recent changes in production technology have made functionally imperative the growth of cities, regional and other division of productive labor, and economic and political integration of vast numbers of people spread over large sections of the world. These functionally necessary changes in social organization could not have come about, however, had not the technological changes that made them necessary also made possible the development of a variety of new methods for conquering space and time.

In this chapter the nature of communication as a social component and the relation between techniques of communication and other social components will be considered. In the following chapter attention will be directed to the nature and role of transportation.

The Symbolic Nature of Communication.—Communication is the process by which one organism conveys through space or time or both its feelings, sentiments, ideas, or knowledge to another organism. Communication may be unintentional, as is the case when the crouch of the cat signals danger to the observant mouse or the hoofprint left by the deer informs the hunter that game has passed this way. It may be intentional, as is the case when the cry of the sentinel quail indicates danger to all the covey or when stones are piled one upon the other to mark the trail for all who follow.

Among the lower animals only the simplest of feeling-states and perceptions are communicated, and these are conveyed mainly by actions that are the more or less natural products of those feeling-states or perceptions. Men, on the other hand, can convey a wide variety of complex feelings, desires, ideas, etc., with considerable accuracy; for men seldom communicate on a nonsymbolic level—by pushing, kicking, or screaming; they communicate with one another symbolically—by actions that are culturally defined as representing specific other actions, things, or ideas. Even the thug secures the “cooperation” of his victim or victims by communicating with them symbolically—by conveying his intent (a symbolic communication) to do bodily harm if his commands (also symbolic) are not obeyed. By symbolic means also, usually more subtle in character, parent communicates with child, friend with friend, government with citizen, and priest with parishioner. It is this ability of men

to develop and use elaborate systems of symbolic communication that is, as was noted earlier, man's most distinguishing characteristic. And since men invariably utilize culturally established systems of symbolic communication, communication among men can, for all practical purposes, be regarded as a symbolic procedure.

Communication and Social Organization.—All social organization—the working together, eating together, and living together of numbers of people—is achieved and maintained by communication. If a number of people converging on a doorway do not collide but, rather, take turns going through, it is because they have communicated with one another and, in accordance with the appropriate convention, have formed themselves into a temporary hierarchy. Likewise it is through communication that workers coordinate their separate activities, that members of a family assemble at the dinner table, that a boy and a girl agree to enter into marriage, etc. Communication is thus the *modus operandi* of social life; and, as will be indicated shortly, the available techniques of communication definitely limit the kinds of organized life that a people can have.

THE PRIMARY TECHNIQUES OF COMMUNICATION

The techniques of communication include such forms of symbolization as gestures, speech, and written symbols and such devices for the transmission and reproduction of these symbols as the telegraph and the printing press. Communication through gestures and speech has presumably existed as long as men have lived in organized groups, for it is impossible to conceive of social life without them. All the primary forms of group life—the tribe, the village community, the clan, the family, and other forms of face-to-face associations—operate through gestures and speech. Gestures and speech are also the base upon which all other modes of communication are built. Writing is speech put into graphic form; radio communication is the transportation of speech through space; the motion picture is the reproduction of speech and gestures. Speech and gestures are thus the primary techniques of communication.

Gestural Communication.—Gestures are socially meaningful movements of the body, most especially of the facial muscles. The meaning of any given gesture is a matter of social definition, and the use of gestures as a means of self-expression is acquired, even as all other social attributes are acquired. In the main gestures are used, intentionally or otherwise, to express subjective feeling-states, mood tones, and thoughts and are seldom used to symbolize things, such as houses, trees, or persons.

In all intimate person-to-person relationships gestural communication provides a sort of nuance or overtone to what transpires on the speech

level. Lovers may talk together endlessly, but the really important things that they tell each other are those told by gestures—the sentiments and feelings that cannot be readily put into words. Parents may threaten the child, but the wise child checks the threats with the expressions on his parents' faces. Strangers exchange polite banalities upon meeting, but each probably pays closer attention to the expression and manner of the other than to the stereotyped words. It is hardly true that the eyes are windows of the soul or that those who are wise in the ways of men can read character at a glance. But it is true that the subtleties, the innuendoes in human relationships, are mainly matters of gestural communication. Person-to-person relationships—the market-place transaction, the enduring associations of the members of a family, and friendship and similar relationships—would be barren and impersonal were it not for the large measure of gestural communication that is involved.

The Language of Gestures.—Meanings of gestural symbols are less standardized than meanings of words, and the usage of gestural symbols is subject to greater variation. A smile, for example, can symbolize almost anything from pleasure to displeasure and from elation to discouragement; and what a smile will mean to the one who sees it will depend in turn upon his interpretation of it. As a consequence, gestural communication is neither specific nor accurate. Each society has, however, something of its own language of gestures.¹ The smile as an indication of pleasure or approval, the frown as indication of puzzlement or displeasure, pointing as a sign of direction, and the nod as a sign of agreement are so common that they suggest some organic basis. If so, that organic basis can be no more than a slight predisposition which has led to common cultural definition; for the human infant has to learn to smile and to use the smile, and what constitutes a smile and under what conditions it may and will be used vary considerably from society to society. The cultural nature of gestural symbols is most evident in such signs as thumbs down to indicate condemnation. This particular gesture, apparently of Roman origin, was incorporated into Western culture. It has no oriental counterpart. Conversely, the Chinese mode of conveying refusal by pressing half-clenched hands together has no Western counterpart.

Much of the presumed difference in the temperaments of so-called "races" is no more than a difference in their gestural languages. Thus the Western idea that the Chinese are a calm, unemotional people and the early Chinese idea that Westerners are temperamentally violent and uncontrolled grew out of the fact that the gestures of these peoples

¹ See D. Efron, *Gesture and Environment* (King's Crown, New York, 1941).

differed in degree if not in kind and that each could not correctly interpret the gestures of the other. Similarly, the common belief that the Scotch are by temperament dour and unhappy and the Italians emotionally volatile appears to stem from the fact that the former tend to use modulated and the latter vigorous gestures.

Because gestural communication is vital to all intimate associations, gestural differences are a significant deterrent to the growth of intimacy and understanding between people of different societies, classes, and other social groupings. Linguistic differences, important though they are, can at least be more or less surmounted by such deliberate procedures as learning the language of the other group or employing an interpreter. Learning to read and to use the gestural language of another group is far more difficult; and although a skilled interpreter in an international conference may be able accurately to translate for his principal the words that are spoken, he cannot do the same for the gestures that accompany those words, if for no other reason than that gestures are not convertible into words. He might tell his principal that he thinks the speaker means what he says; but he would only be providing a conclusion from the gestures of the speaker, not a translation of them.

An understanding of any particular language of gestures—the gestural language of the Chinese, of the New England countryman, of the inhabitants of the Bronx, or of the esoteric crew who operate, mainly through gestures, on the floor of a stock exchange—can be acquired only through prolonged and intimate association with those who use that particular gestural language. And since gestures are at best unstandardized and in the main used and read without much awareness, even the person who has learned to interpret a new gestural language is certain to use it with a lifelong accent. Whereas the Russian may in time learn to speak English without accent, he is likely to continue to “act Russian,” and so be identifiable as of Russian origin, no matter how long he lives in America. And while the girl born in the wrong social stratum may acquire, along with the clothes, the speech that is appropriate to Park Avenue, she is likely to reveal her origins with an unconscious quirk of the lips or swing of the hips.

Verbal Communication.—Spoken language, the basic means of communication, consists of a culturally designated system of verbal symbols; and what particular language the individual will learn to speak, *i.e.*, what system of noises and usages he will acquire, depends entirely upon his cultural heritage. Speaking the culturally designated language is, of course, only a part of communicating by words. Speech has no communication value unless it produces a fairly well-defined response on the part of others. As the individual learns to use words to express his feel-

ings, wishes, and thoughts, he therefore learns also to respond to them in the ways specified by his culture.¹

Speech is much more direct and deliberate than gesture. The speaker is usually quite aware of what he is saying and the listener perceives what is being said, or else he is not a listener. As a means of communication speech is not only more deliberate and more calculated than gesture, it is also much more accurate, or at least can be made so. An expression of distress may be unintentional and is certain to be indefinite; *i.e.*, it indicates neither the intensity of nor the reason for the distress. Through words it is possible to convey some idea of the intensity of the feeling and to indicate with considerable definitiveness the occasion for that feeling.

The nonmaterial elements of the cultural heritage are embodied in words rather than gestures, and through words these elements are transmitted from generation to generation. All the definitive aspects of human relationships, and therefore of social organization, are achieved and maintained via words. The thug may make a threatening gesture with his gun, but he will give his orders to hand over the watch and purse in words. Lovers may tell each other a great many unspecific things by gestures; but, when they come to arranging their marriage, they will necessarily rely on words. And while the "tone" of the life of a family group may arise through and be indicated by the gestures of the members, the basic structure of their relationships will be effected and maintained through verbal communications. Thinking, too, is largely a verbal matter, a sort of subvocal discussion with oneself in which gestures play little if any part. And while in group discussion of any problem nuances may be communicated via gestures, specifics are communicated by words. Thus while gestures are the spice of person-to-person communications, words are the meat and potatoes.

The Origins of Language.—Various speculations have been advanced in the attempt to explain the origins of language systems. Some theorists have imagined that words have a natural meaning, that "stink," for example, means what it does because the word is naturally distressing to the human ear. Other theorists have thought that there is a natural tendency for the human animal to make certain sounds more frequently than others and that these have become culturally associated with the more important objects and persons in the experience of the individual. The various theories regarding the origin of language have been given such graphic names as "ding-dong," "bow-wow," and "pooh-pooh"; and each has in turn occasioned considerable excitement among those of the intelligentsia

¹ See L. Bloomfield, *Language* (Holt, New York, 1933); S. I. Hayakawa, *Language in Action* (Harcourt, New York, 1941); and G. K. Zipf, *The Psycho-biology of Language* (Houghton Mifflin, Boston, 1935).

who enjoy playing mental games.¹ Actually, however, the origins of languages, as of social institutions, customs, and such ancient technical devices as the wheel, are so devious and run so far back in time that they are unascertainable. The meaning that is ascribed to any sound pattern is clearly a matter of social definition; and, to judge by the wide contrasts between language systems and the ways in which new words arise in our own language, the meaning ascribed to any given word (or, to put it another way, the word used to symbolize any given object) is entirely a matter of historical accident. Words, like the other elements of a culture, originate in inventions. Some words, especially those used by modern scientists to designate new discoveries or inventions, are deliberately compounded from older linguistic elements. But so far as is known, most of the words of any language "just happened" and then just happened to gain general usage and to survive as cultural elements.

To say that words just happened to gain the meaning culturally ascribed to them does not, of course, explain their origins. It reflects, rather, the fact that there is no intrinsic value to a word, as there may be to a house, a hat, or a pattern of social relationships. A change in one or even a hundred of the words of a language does not disturb the functional effectiveness of the other words, for the communication value of any word depends wholly and solely upon general agreement as to what the word means. With language, therefore, in a far clearer way than with any other aspect of social life, there is no relation between form and function.

LANGUAGE AND SOCIAL DIFFERENTIATION

Linguistic differences, like gestural differences, do, however, reflect and in turn perpetuate differences between societies and between classes and other groups within each society. All the various languages, dialects, patois, jargons, cants, and argots spoken by the peoples of the world have been developed in isolation, physical or social, and, once established, have served to limit intergroup communication even when circumstances have brought members of different groups together.

Language and Cultural History.—The language of a people has often been used as the basis for inferences regarding their historical origins, migrations, and cultural contacts when direct data on their cultural antecedents have been lacking. The assumption has been made that if two peoples have some language forms in common they have come initially from the same cultural center or have borrowed either from that center or from each other. The number of language forms that they

¹ For further discussion by one who takes the problem seriously, see Chap. V of E. L. Thorndike, *Man and His Works* (Harvard University Press, Cambridge, 1943).

have in common has been taken to indicate the extent and recency of their contacts with one another. The belief that language is a good criterion of social history has led to elaborate cataloguing and classifying of the languages of the peoples of the world. Etymologists have grouped the many languages of the world into a few great linguistic families, such as the Indo-European, with subfamilies, such as the Teutonic, and a number of subsidiary divisions. Thus etymologically English is derived from Anglo-Saxon, which is a version of Low Germanic, which is a branch of West Germanic, which in turn belongs to the subfamily Teutonic, which is a part of the Indo-European linguistic family.

At one time social scientists placed considerable stress on the tracing of linguistic lineage. Some of the early anthropologists, for example, tried to ascertain the "racial" origins of the various peoples of the world by means of their language affiliations. Other social scientists endeavored to ascertain the cultural history of various groups by the same means. Thus from the fact that the English language is etymologically classified as a subdivision of the Teutonic, they would conclude that English culture as a whole was derived from Germanic origins. Actually, the English language, like every other language and culture and like family "blood lines," is anything but pure. At least half the words in English are derived from non-Teutonic sources, mainly French and Latin. Tracing a people's cultural history by their language is consequently about as sound a practice as tracing family history by a name. Sociologists do not, therefore, place much stock in historical inferences drawn from linguistic evidences alone. Tenuous linguistic similarities are of far less significance sociologically than are definitive differences in language forms, for the latter clearly indicate historical isolation and at least a linguistic basis for continuing cultural dissimilarity.

Dialects and Regional Isolation.—The fact that the members of a society speak a common language does not necessarily mean that they can all communicate easily and effectively with one another. In all but the smallest, most homogeneous social populations, such as those of a tribal society, the common language is spoken in a considerable number of ways. Of these variations, dialectal differences in speech are the most characteristic, although not the most sociologically significant.

A dialect, a local, regional mode of speaking the language of the society, deviates from the norm of the language in peculiarities of accent, word usage, and idioms. Some dialects contain so many peculiar elements that, whatever they may be etymologically, they are for all practical purposes special languages. The people who live in and about Canton, for example, speak a dialect that is initially incomprehensible to the other people of China, although it is etymologically but a variant of the common Chinese tongue. Ordinarily, however, the differences be-

tween dialects are such that anyone who speaks one of the dialects can rather quickly acquire an ear for any one of the other dialects. Learning to speak a new dialect is much more difficult, and so persistent are the speech peculiarities acquired in childhood that a skilled philologist can often ascertain the locality in which an individual spent his childhood simply by listening to him talk for a while.

Dialects are developed and perpetuated by spatial isolation. Some dialects, such as that of the Pennsylvania Dutch in America, have developed from fusion and corruption of two languages and may, therefore, indicate the blending of two more or less distinctive cultures. In the main, however, differences in dialect have very limited cultural significance.¹ They indicate a degree of historical isolation, and the extent to which one dialect differs from another is a rough indication of the degree of isolation. But little more than the fact of isolation can be deduced from dialectal differences. The rural people of England, for example, speak a great variety of quite dissimilar dialects, yet their modes of life do not differ one from another in any important regard. The people of Brooklyn speak a dialect so distinctive that "from Brooklyn" has come to mean urban provincialism; but aside from their linguistic peculiarities the people of Brooklyn are pretty much like those of Manhattan and the Bronx.

Since dialectal differences are a product of spatial isolation, they have tended to diminish with the development of modern modes of communication and transportation, most particularly here in the United States. There are still many interesting differences in the ways the people of the Old South, the Deep South, Texas, New England, the Midwest, and other regions of the country speak English. These differences do not, however, hamper communication between the inhabitants of these various regions; and they have nothing whatever to do with the regional differences in economic and political interests that are the basis for certain kinds of interregional conflict. In England and on the Continent the leveling effects of the new means of communication and transportation are not yet so pronounced; but the railroad, the automobile, and the radio have done much to blend out the dialectal differences of the Lancashireman and the Bedfordshireman and the Rhinelander and the Prussian.

Jargon and Social Isolation.—Unlike dialects, jargons have been on the increase in all modern societies. A jargon (or cant, as it is sometimes termed) is a "secret" language not unlike the pig Latin of children's groups and serving much the same purpose. The primary function of a jargon is to set apart from the larger society the members of an occu-

¹ For an example of the way special regional demands may, however, foster the growth of special language elements, see R. F. Adams, *Western Words* (University of Oklahoma Press, Norman, 1945).

pation, profession, or social stratum. Its use identifies the members of such a group, gives them a sense of unity and superiority, and permits them to communicate among themselves in the presence of others. By their jargon, the Oxford-trained may be distinguished from the Harvard-trained, the doctor from the lawyer, the Marxian from the trade-unionist, the professional criminal from the amateur, the riverman from the rail-roader, the bureaucrat from the businessman, the construction worker from the lumberjack, etc.¹

A jargon may have a beginning in the need for special words to indicate the techniques, beliefs, values, etc., that are peculiar to a given occupation or social role. The people of the theater, for example, deal with quite different things and lead a quite different kind of life than do the people of universities. Some of the speech peculiarities of theater people and of academicians no doubt grow out of the fact that among themselves they talk about different things than do farmers, businessmen, and others. But like all jargons, the jargon of the theater and that of the university transcend such special communication needs; on the basis of the special words needed for communication purposes, there is built a great complex of peculiar linguistic usages that can have no other function than to isolate the members of the group from the society as a whole. Instead of such standard terms as nitroglycerin, woman, and cocaine, the American criminal speaks of soup, broad, and snow. And he uses such terms for the same reason that the lawyer uses a ponderous word when a simple one would serve as well, that the physician prefers Latin to English, and that the bureaucrat uses a noncommittal word or phrase if he can unearth one—to keep the “layman” from knowing what he is talking about, to impress the uninitiated, and to give to the initiated a sense of group membership and participation. As the number of specialized occupational and functionary groups has increased, so, too, has the number of jargons. In modern societies, therefore, jargons are much more significant as barriers to communication than are dialects.

Class Languages.—Occupational and other jargons seem to be the modern counterparts to the class languages of those premodern societies in which social differentiations were marked and rigid. Wherever the socioeconomic classes have been sharply differentiated and there has been little individual movement between class groups, as is the case in contemporary India and was the case in many premodern societies, each of the classes has spoken its own version of the common language. In some instances the class languages have been so dissimilar that a separate

¹For some examples of modern bureaucratic jargon, see H. L. Mencken, *The American Language: Supplement I* (pp. 414-418, Knopf, New York, 1945). For a discussion of the role of jargon in the underworld, see D. W. Maurer, “Prostitutes and Criminal Argots” (*Amer. J. Sociol.*, vol. 44, pp. 546-550, 1939).

interclass language has been used for communication between members of the different classes. The conquest and subjugation of native peoples by Europeans has often produced a similar sort of linguistic condition. In the South Seas, for example, the natives constitute a lower class and speak among themselves their native tongue, the whites form a ruling minority and speak among themselves the language of home, while between the native and the white some lingua franca, such as pidgin English, a corrupt English in Chinese syntax, is spoken.

A class language, like a jargon, functions mainly to perpetuate the monopoly on whatever cultural elements and social status belong to the members of the class. Class languages therefore at once reflect and maintain prized class distinctions. In early modern Europe, for example, the use of French as the court language permitted aristocrats, whatever their national antecedents, to associate with one another and gave them the sense of belonging to a truly international superclass. But more than this it assured that only French-speaking commoners could possibly pawn themselves off as members of the aristocracy.

Linguistic Ethnocentrism.—The members of a social group are inclined to be almost as ethnocentric regarding their particular language, dialect, or jargon as they are regarding their productive techniques, their ideologies, and their modes of social organization. The lawyer, for example, will staunchly defend his use of peculiar words and the physician his use of Latin terms; and the Englishman characteristically makes others speak his language, refusing to bother to learn to speak theirs. There is much, and very contradictory, discussion of the "rationality" of this or that language and of the comparative ease with which one or another can be learned; some linguistics-minded scholars have even contended that the key to the cultural development of a people is the form that their language takes. The early superiority of the Germans in the field of chemistry, for example, has been explained by some as a consequence of the fact that the German language is peculiarly suited to new word synthesis and permits unusual accuracy in communication.

It is true, as was indicated earlier, that language is a cultural element that is prerequisite to the development and maintenance of the non-linguistic aspects of culture. Men think mainly in words and add to their culture mainly by thinking. But that differences in cultural development can be traced in any part to differences in language does not follow. The forms of a language seem to have little intrinsic merit; functionally, one language is or can readily become just as good as another for any particular purpose. It was not because European languages could convey different and more complex understandings of the physical and biological world than could the languages of the American aborigines that European culture was superior to that of the Indians whose lands the Euro-

peans invaded. Nor was it because the English spoke English rather than German, French, Italian, or Dutch that England was the first country to become industrialized and that in England industrial techniques developed, for a time, further and faster than on the Continent.

Although each people is disposed to consider its own language better than any other language, every language is actually quite fluid and tends to keep pace with whatever cultural developments may occur on other levels. Seldom is a language a check to cultural developments. Words that are held in sacred esteem, as "democracy" and "capitalism" are in contemporary America, and are not therefore subject to change do not really stand in the way of change. The things that they symbolize may change form, and the sacred word may thereby be redefined without in any way distressing those who hold the word sacred. Nor do the limitations of a language, such as lack of terms for mechanical devices and for the techniques by which devices are fashioned and used, constitute significant deterrents to invention and borrowing. Once the invention or the borrowing has occurred, the language will normally be expanded to describe the new cultural element. What is communicated by a language certainly influences the rate and direction of cultural development, but the character of a language does not determine what is communicated.

Much has been made of the need for a universal language in keeping with the universalization of modern techniques and the growing economic interdependence of the peoples of the world. Artificial languages, such as Esperanto and the more recent Basic English, have been advanced as a solution to some of the major problems of the contemporary world. Undoubtedly linguistic differences somewhat retard the cultural unification of the peoples of the world. Unquestionably, also, many of the conflicts that arise between different ethnic and national groups have their basis in misunderstandings that grow out of inability to communicate effectively. No doubt, therefore, a universal language would foster world unification, provided that the adoption of such a language does not presuppose antecedent unification. But the proponents of the various artificial languages do not stop here; they invariably claim that their new language is better than any of the existing languages and that it provides a more efficient means of communication—that it is more explicit, more logical, more flexible, and far easier to master than a traditional language.¹ They ignore the fact that no spoken language, traditional or

¹For a brief, clear analysis of the functional inadequacies of one of the proposed universal languages, see R. Flesch, "How Basic Is Basic English?" (*Harper's Mag.*, vol. 188, pp. 339-343, 1944). Basic English was concocted by I. A. Richards, coauthor of *The Meaning of Meaning* (Harcourt, New York, 1930), in which it was claimed that in faulty language lies the root of most social evils. This thesis

synthetic, is functionally superior to any other. For any people the most effective, the most logical, and the most readily learned language is their mother tongue.

Linguistic Barriers.—The particular characteristics of any language, dialect, or jargon are of little sociological importance. What are sociologically significant are the differences between languages, dialects, and jargons; for it is the differences that exist and that are in process of development that serve as barriers to free and effective communication. Whether they are a consequence of isolation or a means of achieving isolation, linguistic differences serve to perpetuate isolation. To physical isolation must therefore be added the factor of linguistic isolation; and in many instances the latter has been a much more important factor in delaying cultural borrowing and subsequent invention than have the more obvious physical barriers to intercourse.

SECONDARY TECHNIQUES OF COMMUNICATION

In the past few centuries a number of significant developments have occurred in the field of secondary techniques of communication—techniques by which the space and time limitations of the primary techniques can be overcome. These developments have been encouraged by antecedent changes, largely technological and economic, that made a variety of secondary-type organizations functionally imperative. And as these developments have come about, they have in turn fostered the decline of primary forms of association and the rise of more and more secondary forms of social organization. An understanding of the different kinds of secondary techniques of communication, their functions, and their historical development is therefore essential to a comprehension of the changes that have been occurring in the organizational component of Western societies.

Writing.—The oldest and sociologically most significant of the secondary techniques of communication is writing. Whereas the various spoken languages do not differ much in their functional effectiveness, the various written languages, systems of visual, graphic communication symbols, differ considerably. To some degree the form of a written language has influenced the use to which it has been put.

Because the written symbol, unlike the spoken one, does not die a-borning, it can be transported through space and preserved through time. Through writing a man can communicate with the widely scattered members of his family and with his yet unborn grandsons and

has been developed into the cult of semantics, which holds that the way to retrain the dog is to trim his tail—*i.e.*, that by a clarification and purification of language man can be made to behave more rationally. See A. Korzybski, *Science and Sanity* (Intern. Non-Aristotelian Library Publ., Lancaster, Pa., 1941).

great-grandsons. Through writing an association may be established and maintained among people who never meet face to face, and the future may be tied to the present in a more tangible and accurate fashion than it can be by the spoken word. The written language is, therefore, one of the key elements of a culture, one so important that the distinction between literate and preliterate peoples is probably the most discriminating of the distinctions that can be drawn between societies.

Forms of Graphic Symbolization.—The simplest form of graphic symbolization, and the first in point of historical development, is ideographic writing, the picturing of a thing either realistically or in some stylized fashion. Ideographic writing permits only very restricted communications. In the first place the writing procedure is cumbersome and difficult. Moreover, only the simplest ideas—objects and basic actions, such as “man fishing”—can be represented by ideograms. The picturing of events, of time sequences, and of abstractions is so laborious that it is next to impossible. Furthermore, communication via ideograms is inexact, for what has been written is subject to wide interpretation, even as the intent of a modern artist is often debatable.

In the societies in which it was used, ideographic writing apparently served more of a decorative than communicative function. Although it led to the development of more flexible and effective symbolization, the ideographic writing of the early Egyptians and that of some other peoples did not itself play any other direct role in their lives or in the development of their cultures. Historically, ideographic writing has been supplanted by or supplemented with phonetic writing, the most elementary form of which is the representation of the spoken word by a picture or character (phonogram). Both the Egyptians and the Babylonians developed elementary phonetic symbolization, as did the Chinese, who have retained the system of word representation by characters down to the present time.

Considerably more advanced is the graphic representation of the basic sounds of the spoken language, syllables, or, at a higher level of development, letters. By a sequence of these graphic symbols the spoken tongue can then be visually recorded. The technique of syllabic writing (and, to a limited extent, alphabetical) was in use during the latter periods of the Egyptian and Babylonian civilizations. Alphabetical writing as a technique was diffused to Europe (the written languages themselves were not diffused) from the Near East through Greece and later Rome. The art of alphabetical writing lay more or less dormant in Europe after the fall of Rome until the early Middle Ages, when it was revived first by the Church scholars, who used it only to reproduce ancient documents in what then and now passes for written Latin, and subsequently by merchants, craftsmen, etc., who applied the technique to the recording

in the vernacular of contracts and other matters of interest to merchants and men of practical affairs.

Sacred vs. Secular Writings.—Both syllabic and alphabetical representation have an inherent advantage as a means of communication over word representation or "character" writing. In character writing every spoken word that is to be communicated by writing must have its distinctive symbol. This form of writing is, therefore, awkward to use and difficult to master. Thousands of characters must be committed to memory before one can become proficient in the use of such a system. This difficulty has historically limited the uses to which character writing has been put.

But even more significant sociologically is the fact that character writing is inflexible and that because of this quality a language so written in time becomes a dead one. A spoken language is always undergoing change; new words are devised or borrowed, old words fall into disuse, pronunciations and meanings shift gradually, etc. Since in alphabetical writing the symbols used represent basic sounds, alphabetical writing tends to keep up with changes in the spoken language. While character writing can, at least in theory, keep pace with the development of new and the abandonment of old words, it cannot be easily adapted to changes in the way the language is spoken. Thus while the spoken word for the object "house" may change radically over the centuries, the written character for the object "house" remains constant. In time, therefore, a written language of characters represents the language as it was spoken rather than as it is spoken.¹

The gap that time brings between the language written in characters and the spoken language means that to be literate one must know two quite dissimilar languages. The written language of China, for example, became fixed some centuries before the beginning of the Christian Era. The spoken language, however, continued to change, with the consequence that within a few centuries the written language had very little resemblance to the spoken one.

Where, as in premodern China, the written language is a dead language, writings tend to serve sacred rather than secular purposes. The written word is mainly a communication from the distant past to the present; it is little used to develop and transmit new ideas and understandings. In the first place, what is written in a dead language is neces-

¹ The relation of a method of graphic symbolization to its function is even more evident in the distinction between the Roman and the Arabic systems of numerical representation. The Roman system, and the same is true for many other systems, such as that of the Chinese, hampered the development of mathematics. Modern mathematics stems from the Arabs, and its development with them seems to have been facilitated by the way that they recorded numbers. See A. Hooper, *The River Mathematics* (Holt, New York, 1945).

sarily limited to the knowledges, ideas, and beliefs current during the time that the language was a live one. In the second place, the fact that the language is dead means that learning to use it is so difficult that few will do so and that the mass of the people are dependent upon those few for their knowledge of all that has been and is being written. Historically, the literate minority under these conditions have constituted a priestly class, as have the literate of premodern China and those of present-day Tibet. Such a class uses its literacy as a tool for the domination—benevolent or otherwise—of the society; ancient writings are held sacred; and through devious interpretations of these ancient writings the priestly class maintains its position and defends the social *status quo*.

The early medieval scholastics, who revived the use of writing in western Europe, did their writing in Latin. No doubt this was an historical accident, stemming from the fact that at the time all that had been written was written in Greek or Latin, and thus it was natural for the early scholars to pick up where the Romans had left off rather than to apply writing techniques to the currently spoken language. The use of Latin did, however, give to the medieval scholars all the advantages of a dead written language; they achieved a monopoly on literacy, became the interpreters of the "great books," and thus used writing as a tool for religious and political domination. The ease and flexibility of alphabetical symbolization led, however, in time to the vulgarization of writing technique; and within a few centuries writing was being done in all the languages and dialects of western Europe.

Writing and Social Organization.—In the main the function of lay writing prior to the development of printing was direct, person-to-person communication. The merchants of Greece, Rome, and medieval Europe, and to a much slighter extent those of China and elsewhere, used the written language to keep records of their affairs, reducing the strain on their memories. They embodied contracts in writing, thereby securing permanent and tangible evidence of promises and thus reducing the strain on their consciences. They informed and directed their agents at a distance through writing, thereby avoiding the errors that inevitably creep in when communications must be entrusted to verbal messengers. Such uses of writing made feasible the development of large-scale and widely scattered trade and other organizations. Political leaders used the written language for the recording of laws and decrees, for the dissemination of political regulations through the political system, etc.

Writing, most particularly a flexible and simple system of writing, permits the rise of secondary forms of political organization. Where men are dependent wholly upon primary techniques of communication, no enduring, complex, and highly integrated organizations can exist beyond the range of person-to-person contacts. The feudal lord knew all the

members of his manor, and he could, when need arose, speak to each of them directly. The king, by contrast, could know personally only a very few of those who lived within his realm, few even of his political functionaries. If he had not been able to "speak" to them through the written word (the old practice was to have proclamations read aloud in public places for the benefit of the illiterate), he could not with any accuracy have directed and coordinated their activities. His edicts would have reached the man in the street, if at all, as much-garbled rumors, and the unity of the realm would have been a fiction rather than a somewhat tenuous fact.

Preliterate peoples have never been organized into groupings larger than clan, tribal, or village units, although in some few instances loose federations of such groupings, such as the Iroquois "nation" of pre-modern America and the Bantu federation, did exist. Secondary forms of organization—states, empires, nations, and all the various forms of economic, religious, and intellectual association that are essential to them, are dependent upon the written word. And until men invented some technique of writing, they did not develop those forms of organization that distinguish civilized from primitive peoples.

Nor did they develop those production techniques that are essential to civilized modes of life. The great developments in Chinese civilization occurred during the time that the Chinese written language was a live language; the most rapid technological developments in both the Egyptian and Babylonian civilizations occurred at the time when their systems of writing were being improved and extended and before writing became a priestly monopoly. Secular writing greatly facilitates the invention and diffusion of cultural elements, particularly technological ones. How secular writing aids invention and discovery can, perhaps, best be seen in the intensification of invention and discovery after the advent of printing.

Printing.—During or before the eighth century a sort of handicraft method of printing developed in China. Characters were carved on separate wood blocks (later they were cast in metal), and these were used one after the other to stamp out writings. This printing technique was applied almost exclusively to reproduction of the "great books," the writings of the ancient philosophers. In other parts of the world writing was manual, and copies of written works were produced only by laborious copying. So far as the day-to-day keeping of records, making of contracts, and personal orders and communications were concerned, this limited means of reproducing the written word was no serious handicap to the use of the written word. But it did mean that the recorded wisdom—and the mythology—of the past was accessible to only the few. Thus

in medieval Europe copies of the Bible and other ancient writings were rare, the cherished possessions of the scholarly priests. The limited availability of writings together with the dead-language character of what was written gave the priests a monopoly over the records of the past.

By the fifteenth century, however, a number of developments converged to break this monopoly of the priests in western Europe. One was the gradual application, already mentioned, of the technique of alphabetical symbolization to the living languages of Europe. Another was the introduction into Europe of the art of papermaking, apparently a Chinese invention, and the adoption of paper for all secular writing. (The priests continued to use parchment.) The third and dependent development was the invention of the printing press, itself a synthesis of a number of techniques. The Chinese-originated technique of cutting or casting type had gradually made its way into Europe by way of the Arabs. When applied to alphabetical symbolization, very few blocks of type had to be cast, for these few could be combined to spell out all the words in the language. From the composing of words to the composing of sentences was but a step. To the method of composing was then added the cider or wine press to make the printing press.¹

The invention of the printing press made possible for the first time in human history comparatively cheap and easy reproduction of written matter. Once the type was set up, a thousand copies could be printed with but little more labor than a hundred; and since the type could be used over and over for different material, the initial cost of casting it could be spread over the printing of many books. As paper production increased in response to the demands of the new presses, a steadily rising number of books and pamphlets became available to the merchants, lawyers, and others who had learned to read and write for purposes of their own.

For a century and more, however, the printing presses devoted themselves mainly to the reproduction, usually in the vernacular, of religious materials—the Bible, various commentaries thereon, and religious polemics of one sort or another. The increasing availability of reproductions of the documents upon which the authority of the medieval Church rested made it possible for laymen to “test” Church dogma against the great books and for varied interpretations of them to develop. At the same time printing permitted those who dissented from Church dogma to communicate their views to an increasingly large number of people. Thus began a movement that culminated in the Reformation of the sixteenth and seven-

¹ For the history of the development of the technique of printing, see R. L. Duffus, “Printing and Publishing” (*Encycl. Soc. Sci.*, vol. 12, pp. 406-415); and T. F. Carter, *The Invention of Printing in China and Its Spread Westward* (2d ed., Columbia University Press, New York, 1931).

teenth centuries, when the various Protestant sects arose to challenge the religious monopoly of the Church.

The rise of science, which will be discussed in a subsequent chapter, was in large measure stimulated by the development of the printing press. Through it the secular writings of the past, long monopolized by the priests and held in sacred esteem, were made available to many laymen. The works of Plato and Aristotle, a variety of early historical treatises, the astronomical and geographical speculations of Ptolemy (foundation for the development of early modern navigation), and many other previously unaccessible records of the past became, via printing, a part of the heritage of every literate European.¹

Writing and Cultural Development.—The written word, especially when what is written is widely diffused through printing, increases in a number of ways the chances that inventions and discoveries will be made and will become culturally effective. What is discovered and invented at a given place and time may be irrelevant to what the discoverer or inventor is seeking, it may be incomplete and hence useless, or it may fail to be exploited because of social resistance to it. Unless such an invention or discovery can be recorded in permanent form, it will in time be forgotten. Only the operational elements in a culture can be preserved through time with any exactitude by word of mouth. If a currently or locally unusable invention or discovery is embodied in writing, it can be preserved until it becomes useful or it can be communicated to a locality in which it may prove useful.

The recording and printing of scientific findings as the various sciences have developed has resulted in the accumulation of locally and momentarily unusable knowledge. Printed records, scientific and otherwise, thus have become a storehouse of wisdom upon which a would-be inventor or discoverer can draw at will. Many a recent invention and discovery has been based upon elements drawn from the literature of science, where it had been placed on file against the chance, however slight, that it might someday prove useful.

The printed word also makes for a wide and rapid diffusion of inventions and discoveries within the membership of a society and between societies. It gives to the many what would otherwise be the possession of the few; and because a greater number share it and contribute to it, the chances are greater that new combinations of knowledge, new inventions, will occur. The rapidity with which cultural changes, technological and otherwise, have been occurring in Western societies during the past few decades is intimately related to the greatly increased use of the printed word as a medium of communication.

¹ See H. G. Putnam, *Books and Their Makers during the Middle Ages* (2 vols., Macmillan, New York, 1896, 1897).

The Newspaper and the Popular Periodical.—The development of science was stimulated by the invention of the printing press, and hence all that science has done to affect modern societies is indirectly related to this basic invention. But although the printing press made possible sufficiently wide diffusion of knowledge and dogma to break the monopoly of the medieval priests and to inaugurate the scientific movement, it did not bring the printed word to every member of society. Although the proportion of western European people who could read and write grew steadily over the centuries, for lay use of writing became more and more general, there was little printed matter available for the common man. The presses were devoted primarily to the printing of what were considered to be enduring materials, books, tracts, and pamphlets of interest to intellectuals and pseudointellectuals. The vulgar novel, which came into popularity early in the seventeenth century, was the major concession made to the commoner.

Toward the end of the seventeenth century, however, there began to appear printed handbills bearing commercial announcements, data on the arrival and departure of ships, reports on events of general interest, and the printer's comments on the state of human affairs. These handbills and the almanacs and other kinds of papers that soon developed to provide printed material on matters of current concern served a number of functions: they disseminated via the printed word the rumors and gossip that would otherwise have spread via word of mouth; they tended to express and in turn to mold opinion regarding matters of public concern, theretofore possible only through the person-to-person relationships of coffee house and public square; they provided various kinds of entertainment; and they served as an organ through which political, economic, and other leaders could address themselves to an increasing number of widely scattered people.¹

Printing was still handicapped, however, by the scarcity of paper (made from rags) and the mechanical limitations of the hand press. Printers were hampered, moreover, by the rigorous restrictions of the printers' guilds and a variety of legal and religious restraints upon what would today be termed the "freedom of the press." During the eighteenth century these social limitations on printing gradually relaxed; after 1850 methods of making paper from grasses and then from wood pulp helped to relieve the paper shortage; and before the close of the nineteenth century the development of the rotary press solved the problem of cheap, rapid reproduction of printed material. The handbill, which had meanwhile and in spite of many handicaps grown both in size and popularity,

¹For a detailed description of this process as it occurred in America, see S. Kobre, *The Development of the Colonial Newspaper* (Colonial Press, Pittsburgh, 1944).

then became a major means of communication and the primary means of "mass" communication. It was soon supplemented by what was at basis an extension of the old almanac—the popular periodical.

Technological factors were not the only ones involved in the development of printed mediums for the masses. The rapid growth of cities, which brought together people from various backgrounds to live together in large, relatively impersonal aggregations; the increasing concern of the common man with the political and other problems of the times, problems that were increasing in complexity and intensity; the political and ideological changes that gave accent to personal liberty, including the liberty of the editor to say what he pleased—all these and many other factors combined to increase the importance of the printed word for the layman as well as for the scholar and scientist.

As it has evolved, the popular press has come to serve a great many functions, not always compatible one with another.¹ The diffusion of culture, mainly urban in character and often representing the interests of minority groups, is one of its primary functions. Thus, through advertising, new commercial products are introduced to consumers much more rapidly than they could be by local merchants or peddlers, as they formerly were. Advertising, news, and comments on the life of the urban community, etc., have brought to the rural dweller knowledge, however distorted, of urban life and have often led him to want the things of the city or to go to the city. At the same time the popular press serves somewhat to integrate large numbers of persons who are scattered and who are engaged in diverse activities. It is largely through the press, for example, that a semblance of political-party unity has been developed and maintained over large areas and among highly diverse peoples. And fully as important, although it is often disavowed by newspaper ideologists, is the fact that the popular press has become a major medium of entertainment.

ELECTROTECHNOLOGY AND COMMUNICATION ²

Developments in printing technology made possible cheap and rapid production of newspapers and other popular printed mediums. Developments in the technology of electricity wrought a revolution in the means by which words to be printed ("news") could be brought to the printing plant. The early handbill editors were as dependent as the local tavern

¹ See D. M. Keezer, "Press" (*Encycl. Soc. Sci.*, vol. 12, pp. 325-344); A. M. Lee, *The Daily Newspaper in America* (Macmillan, New York, 1937); and M. M. Willey and R. D. Casey, "The Press in the Contemporary Scene" (*Ann. Amer. Acad. Polit. Soc. Sci.*, vol. 219, 1942).

² The general works on this subject are G. C. Crawley, *From Telegraphy to Television: The Story of Electrical Communications* (Faber, London, 1931); and A. W. Page, et al., *Modern Communications* (Houghton Mifflin, Boston, 1932).

keeper upon the word of casual travelers for news of events happening at a distance. In time the more enterprising editors came to employ residents of distant cities as correspondents; and with the evolution of postal systems, the editors were able to gather written reports from them. News still traveled very slowly, however. During the Napoleonic wars, Lloyds of London built a semaphore to transmit war reports from France across the English channel. The semaphore device had been in use for a half century or more by various Continental governments, particularly for military purposes; but as a communication technique it was hardly more effective than the smoke signals of the American Indians, and it was decidedly primitive in comparison with the drum-language system that had long been in use by the natives of Africa. So far as speedy transmission of words was concerned, eighteenth-century Europe had made no significant advances over medieval Europe.

The Telegraph and the Postal Union.—Toward the middle of the nineteenth century, however, developments in the science of electricity culminated in the invention of the telegraph (credited to Morse, 1844). Within a few decades the more important cities of every Western country were linked by wire; news collecting and transmitting agencies were organized; and newspapers began to take on a national, as distinct from local, character. The installation of underseas cables soon followed, and before the end of the century the continents of the world were thus brought into as close and intimate communication via words as neighboring towns had formerly been.

Paralleling this integration of communications via telegraph and newspaper was the gradual establishment of governmental postal systems, by means of which written and printed communications could be dispatched to every hamlet in the land both cheaply and safely. During the latter half of the last century, the various national postal systems were internationalized by the establishment of the Postal Union, the most successful and significant of all international arrangements that have so far been devised.

The Telephone and the Teletypewriter.—The telephone, a development out of the telegraph, first appeared in practical form in 1876 (patented by Bell).¹ The new voice-transmission technique was first applied to intracity communications (from merchant to railroad station, for example), and by the end of the century European and American cities were studded with poles and canopied with telephone wires. (During the course of this century the wires have gone underground; and many conversations, rather than just one, are carried on each wire.)

The telephone somewhat displaced the written word as a means of short-distance person-to-person communication. At the same time, how-

¹ For a brief history of the technological developments involved, see J. W. Stehman, "Telephone and Telegraph" (*Encycl. Soc. Sci.*, vol. 14, pp. 560-567).

ever, the telephone furthered the development of new modes of organization. The party line of a generation or two ago, for example, provided a means whereby housewives who were scattered about a village or rural area could "get together" for gossip. The modern businessman, with his telephone on his desk, can speak with any one of hundreds of thousands of people should he wish to do so; and he is able to direct a vast and scattered business enterprise with something of the personal touch that the businessman of a century ago used in his management of a hundred or so employees. When the typewriter and the telegraph were united to produce the teletype machine, written messages could be distributed to widely dispersed sections of a business or other organization as rapidly as the old-time office boy could distribute memorandums to the various offices within a single building.¹

The Radio and the Motion Picture.—With the development and intensive use of radio, man has renewed his dependence on the spoken word, but with the significant difference that via radio the spoken word transcends space and may be heard by millions of individuals. To some extent the radio, as it is now utilized, has become a competitor of the newspaper. In America particularly, radio technique has been exploited in much the same manner as the rotary press—by commercial enterprise for the informing and misinforming, the entertaining, and the propagandizing of those who can and will listen. In European and other countries it has been put to similar ends by political rather than commercial agencies. To this extent, radio technique has given to the spoken word what the printing press and telegraph gave to the written word—ability to reach many rather than a few.² Radio has, however, had many other applications, such as the coordination of diverse and dispersed military elements, planes, tanks, etc., in warfare.

Insofar as communication is concerned, the conquest of time seems to be complete now that what men do and say can be recorded in sound motion pictures; and the conquest of space would seem to be complete now that what men are doing as well as what they are saying can be transmitted by television while they are doing and saying it. But what new devices electrotechnology will bring to the field of communications no one can foretell, and what their social implications will be remains to be seen.

¹ For a more detailed analysis of the social implications of the telephone, see M. M. Dilts, *The Telephone in a Changing World* (Longmans, New York, 1941).

² See P. F. Lazarsfeld, *Radio and the Printed Page: An Introduction to the Study of Radio and Its Role in the Communication of Ideas* (Duell, New York, 1940); and M. M. Willey, "The Role of Radio in the New Social Order" (*Publ. Amer. Sociol. Soc.*, vol. 29, pp. 141-153, 1935).

THE NEW TECHNIQUES AND SOCIAL ORGANIZATION ¹

The development of increasingly effective secondary techniques of communication has had a number of interrelated consequences, some of which have been indicated in the preceding pages. The most evident of these consequences has been the acceleration of technological change, the result of the wide diffusion of knowledge that these new modes of communication have brought about. Less evident, perhaps, but of even greater sociological importance is the role played by the new communication techniques in the shift from primary to secondary types of human association—from family to state, from community to public, etc.—and the related shift from a sacred toward a secular regard for traditional social practices.

Secularizing Consequences.—More than anything else, the new modes of communication have tended to lessen the isolation of the various peoples of the world. The modern man, as a consequence of what is made available to him via printed mediums and of what is brought to him via newspaper and radio, etc., has a somewhat broader social outlook than the member of any premodern society. He knows a little, if not much, about the history of his society; and he has at least been made aware of the fact that his own social ways are not the ways of all people throughout all time. To that extent he is less ethnocentric than he otherwise would be and less inclined to consider his own social practices as sacred and inviolable. The exceedingly dynamic character of modern societies is, therefore, in no small measure related to the particular changes, technological and otherwise, that have revolutionized the communications component of modern societies.

The historic decline of isolation has somewhat lessened the hold of local traditions, ideas, and beliefs and has encouraged the growth of a more secular outlook toward societies. At the same time the new communication devices have brought to each locality from diverse sources "foreign" ideas, beliefs, and practices, some of which have been adopted and incorporated into the local culture. This adoption of the foreign has of itself lessened, even as it reflects a lessening of, the reverence and superstitious awe with which peoples have formerly held their own cultural ways. Thus provincialism, so much a part of any highly stable social system, has tended to give way to a certain social sophistication and cosmopolitanism. Today even those ideologies, such as Marxianism, social

¹ General discussions of this topic will be found in D. Waples, ed., *Print, Radio, and Film in a Democracy* (University of Chicago Press, Chicago, 1942); M. M. Willey and S. A. Rice, *Communication Agencies and Social Life* (McGraw-Hill, New York, 1933); and D. O. Woodbury, *Communication* (Dodd, Mead, New York, 1931).

Darwinism, and trade-unionism, that are held by their proponents to represent ultimate truths are usually justified on secular rather than sacred grounds.

Rise of Secondary Associations.—The new techniques of communication have likewise been instrumental in somewhat lessening the dependence of modern peoples upon old primary face-to-face forms of group life and in attaching them to new secondary forms of association. As the new means of communication brought to the country boy a knowledge, however incomplete, of the world beyond his direct experience, his faith in the naturalness and inevitability of his modes of life, already disturbed by changes in production techniques, etc., was weakened; and he acquired ambitions, desires, and, through these, modes of conduct that were foreign to the culture that was brought to him by word of mouth and by direct example. In time, then, the rural way of life was in some degree urbanized; and where it was not urbanized rapidly enough to suit the individual countryman, that countryman left farm and field to enter city and factory, both of which were organized mainly through secondary means of communication. In similar ways, small towns have come to take on the qualities of big cities, and big cities in turn have become increasingly like one another. As all this has been happening, the basic social institutions, developed under prior means of communication and mainly of a face-to-face nature, have been weakened. The family, for example, cannot impose its values and practices upon the growing child when that child has access to contrasting values and practices through such mediums as the newspaper, the mail-order catalogue, the radio, and the motion picture. Of themselves these external influences might be of slight significance; but when they impinge upon a milieu already functionally disorganized by economic and other factors, they encourage a break with the old ways and suggest new possibilities.

The intimate relationship between communication technology and social organization can be demonstrated by a multitude of specific cases. The contrast between the complex but always tenuous political unification of the peoples of old China and the even more complex but highly effective political unification of the people of contemporary America is, for example, in part traceable to differences in communication devices. The ties that bind the millions of Americans together, insofar as they are bound together, are communications via newspapers, books, magazines, radio, etc.; and none of these devices were available to the premodern Chinese.

The latest war has provided many illustrations of the interdependence of organization and communication and of the way in which new means of communication permit the development of new forms and patterns of group action. The German blitz technique, for example, was at basis

coordinated attack by numbers of semi-independent units composed of tanks, planes, and other mobile assault equipments. The use of semi-independent small attack units was nothing new. Nor were tanks, mobile guns, and planes. What was new was the coordination of the individual efforts of many such units. And this coordination of dispersed units was accomplished by means of two-way radio communication, a means of communication that had developed between the close of the First World War and the opening of the Second World War. One of the reasons why the Germans came so very close to achieving their military ambitions was that they had learned to make tactical use of this new communications device. Subsequently, of course, others made similar and even more fruitful applications of this and other new techniques. Global war, as it came to be called, was dependent upon world-wide means of communication.

Ideological and Organizational Barriers to Communication.—The techniques of communication fix the potentialities for communication between individuals and between social groups, but how fully and to what ends such potentialities are put are determined by other factors. Historically, these other factors have often operated as barriers to the fullest use of the new techniques, by limiting either their exploitation or what could be communicated or both.

In terms of communication technology, every contemporary American is "closer" to all the peoples of the world than his great-grandfather was to the people who lived in the neighboring town or village. But the fact that the modern American can communicate accurately and instantaneously with all the peoples of the world does not mean that he will want to do so, that he will be permitted to do so, or that, if he does do so, he will understand what they "say" to him and they what he says to them. The peoples of the world are still broken up into a multitude of linguistic and cultural groups, into class, racial, occupational, national, and ideological units, each one an island of semi-isolation in the vast sea of potential communications. The social fragmentation of the peoples of the world is in many respects diminishing, and the new communication techniques are playing their part in this process. But existing social differentiation, most particularly in its organizational and ideological aspects, is still and no doubt will for long continue to be a barrier to free and effective communication.

So far, for example, the new secondary techniques have done little to lower the age-old linguistic barriers to intercultural communication. Most of the peoples of the world read newspapers; but they read them in their own languages. In some instances, moreover, the uses to which new techniques have been put seem actually to have increased rather than diminished the social distance between the various peoples of the world.

Just as travel may "narrow" the traveler, making him more than ever convinced that there is no place like home, limited and distorted communications may be worse than none at all.¹ Certainly the people of nineteenth-century America viewed the Russians with greater favor than did the Americans of the 1920's. The growth in the means of communication was not, of course, wholly responsible for this change in outlook; but it was a significant element. Over the past twenty years, Hollywood's motion pictures have been going to most of the peoples of the world; yet it can hardly be said that through American motion pictures the peoples of the world have gained an understanding and comprehension of American society. No myth about America devised by the imagination and perpetuated by word of mouth could be further from the truth than what the Chinese, the Indian, or the African learns about America via the motion picture of today. Documentary films could give a reasonably realistic picture of life in foreign lands, and to a small extent travel films do. But although motion pictures may aid somewhat in the diffusion of superficial aspects of culture, such as the wearing of hats, trousers, and lipstick, the vast majority of them contribute little, if anything, to the growth of intercultural understanding.

The most subtle of the social barriers to communication are those that are self-imposed—the barriers that arise from unwillingness to listen, wishful distortion of what is heard, etc. As has been indicated, the ideological aspect of a culture provides the individual with a folk frame of reference through which he sees the world and into which he forces the facts that are brought to his attention. The gradual secularization of modern societies has somewhat loosened the folk frame of reference regarding certain kinds of facts. But in the main, if the facts brought to him by the new means of communication do not fit into the cultural frame—if they do not square with what he has been taught to believe—the individual tends either to disregard them or to distort them. These cultural frames vary considerably from group to group, with the result that a given event, however well reported and widely disseminated, may mean entirely different things to members of different nations, different classes, different religious groups, etc.

Censorship and Propaganda as Forced Isolation.—Events and facts are not, however, either well reported or widely disseminated. Since the potential consequences of increased intercommunication between nations, classes, and other groups are generally adverse to the maintenance of the local *status quo*, vested interest groups of one sort and another have continually struggled to check such communication. Just as the medieval Church fought the rise of science and the communications on which

¹For an elaboration of this point, see D. Waples, "Communications" (*Amer. J. Sociol.*, vol. 47, pp. 907-917, 1942).

science thrived and just as kings subsequently endeavored to keep their subjects free from contacts with the contaminating ideas of other peoples, so contemporary leaders, both political and economic, at times endeavor to control the lines of intergroup communication. Their efforts to control take the negative form of censorship and the positive form of propaganda.¹

The new communication devices—press, telegraph, and radio, in particular—lend themselves to centralized control, since by nature they bring about a concentration of news sources. When news was spread by word of mouth, everyone was a potential bearer of news; and little control could be exercised over news. Today newspapers and radio, the principal sources of news and opinion for tens of thousands, can be so controlled and used that the reading and listening publics learn only what is favorable to the interests of the controller. Such control is one of the standard tools of political dictatorship, and it has been resorted to in a dictatorial manner in democracies during the crisis of war.

Where, as in England and America, a strong tradition of freedom of speech has developed along with the new techniques of communication, peacetime censorship is covert and indirect; and propaganda tends to take such obvious, and hence detectable, forms as commercial advertising and political editorializing. News, as such, flows with remarkable freedom, at least in comparison with such countries as Spain, Russia, and those of Latin America. Nevertheless, even the "free" press and radio tend to represent vested interests. In both England and America the newspapers and popular periodicals (and in America the radio broadcasting stations as well) depend for the major part of their income upon advertising. They tend, therefore, to represent the economic *status quo*. Moreover, most newspapers and periodicals inevitably reflect the political ideologies of their publishers.

Political and economic control of the uses to which the new techniques of communication are put has not, however, entirely offset the secularizing consequences of these techniques, even under political dictatorship and during times of war. In a society of the sacred type, to suggest that the traditional leaders—priests or princes—were fallible and somewhat less than divine was sacrilegious and punishable, perhaps by death. In contemporary societies the lines of communication, with a few striking and notable exceptions, are by comparison free and open. The fact that even during the height of an unprecedented military crisis American and

¹ See W. Albion, *Public Opinion* (McGraw-Hill, New York, 1939); F. C. Bartlett, *Political Propaganda* (Macmillan, New York, 1940); H. L. Childs, *An Introduction to Public Opinion* (Wiley, New York, 1940); L. W. Doob, *Propaganda, Its Psychology and Technique* (Holt, New York, 1935); and H. Lavine and J. Wechsler, *War Propaganda and the United States* (Yale University Press, New Haven, 1940).

British civilian and military mediums of communication ventured to discuss the inadequacies of political and military leadership would have struck the man from old China, feudal Europe, or Nazi Germany as unthinkable heresy. Imperfect and subject to control though the lines of intergroup communication may now be, their freedom is unparalleled in human history.

Communication and Entertainment.—The socially unifying potentialities of the new communication techniques have in no country and at no time been exploited to the fullest. Much of the use made of these techniques has had none but local and immediate significance, for it has been intended as entertainment and has served as such. As entertainment, communication is an end in itself rather than a means to an end. The symbolic manipulation is directed toward the arousal of pleasurable feeling-states rather than toward the conveyance of ideas, sentiments, or understandings or toward control over the overt behavior of others. When so used, writing, printing, and speech are no more means to ends than is music. The story, the typical mode of entertainment via speech, is just verbal music. Although ideologists may insist that comics, novels, plays, "soap operas," motion pictures, and even musical compositions have "social significance," the fact is that their function is to entertain and nothing more. This point will be elaborated in a subsequent chapter.

The printing press, the radio, and the motion picture have been applied primarily to the provision of entertainment. Whereas the scientific book or article reaches a few hundred or thousand, the novel and short story reach thousands and even millions; whereas the usable information and opinions in the daily newspaper (the weather and stock-market reports, facts about significant events, etc.) might cover a page or two, the dramatically written-up trivia run to many times as many pages; whereas the radio may include an hour or so of straight news reporting, it provides fifteen hours or more of music, drama of a sort, "shows," and journalistic romancing. And the motion picture was from the outset applied to entertainment, and thus it has largely remained.

Ritualized Communication.—In another way also the new techniques of communication are utilized as ends in themselves, and in this instance their application has considerable negative significance for society. A large proportion of what conventionally passes for communication is actually organized ritual, generally spoken of as paper work. Certain kinds of modern organizations—the governmental bureau that has outlived its original functions, the military force with no war to fight, the society for the preservation of its executive secretary, etc.—live mainly by and on such ritual. In earlier times comparable organizations were devoted to such ritualistic practices as praying and torturing the flesh for the good of humanity, and the priests of Tibet still spend their time

turning prayer wheels. With the coming of cheap paper and cheap printing and, more recently, of the typewriter, the dictograph, and the mimeograph machine, the writing of letters, the issuance of memorandums, and the publication of pamphlets, articles, and even books has become something of a ritualistic end in itself.

In modern business as well as government, a letter is often judged by its length rather than what it conveys; and the aggressive businessman or political functionary is frequently evaluated, both by himself and by others, by the number and length of the memorandums that he has prepared for no one to read. The superelaboration of paper work, which runs through all forms of human activity today and has become the sole purpose of many activities, may be simply one of the ways by which modern people sop up the time and energy that have been released from productive labor by the mechanization of the productive processes. But as the keeping of records simply to keep records, the filling and filing of forms just because forms are available, and the writing of long letters where short letters would say as much gain status as socially sanctioned rituals, such activities come to be mistaken for means to ends. There then looms the prospect that the vital functions of communication may ultimately be lost sight of and that so large a proportion of modern populations will be drawn off into the ritual of paper work that too few will be left to do the world's work—the cultivation of fields, the extraction of minerals, the fabrication of goods, and the transportation of what is harvested, mined, and produced to the places where those things are most needed. The possibility is very distant, perhaps, but it is also very real.

The new techniques of communication have played and will continue to play a vital role in the secularization of modern societies, in the lessening of social isolation and the development of wider cultural outlooks, and also in the decline of primary and the growth of secondary forms of human association. But these new tools, like any social tools, can be variously applied. To the extent that they are used simply because they are available, they become the basis for a new form of sacred life, one in which the making and transmission of symbols via press, typescript, *et al.*, take the place formerly occupied by the prayers of the priest and the spells and incantations of the primitive magic man.

Chapter XI

TRANSPORTATION

TRANSPORTATION is the physical conquest of space; it does for man and his goods what communication does for his ideas, his knowledge, and his beliefs. The methods and means of transportation determine how far and over what terrain men can range in search of food and the other necessities of life, how easily they can move themselves and their possessions from an unfavorable habitat to one more to their liking, and how easily they can meet peoples of other places or other societies to exchange goods or, perchance, to engage in war.

It is hardly necessary to stress the importance of transportation as a social component. Modern men, who live so much on wheels, are more or less sensible of the fact that they could not live in the suburbs and work in the city were it not for the commuters' train; that they could not leave home for the station with only a few minutes to spare were it not for the automobile and modern roadway; that they could not get from the station to the office quickly and comfortably were it not for the bus, the streetcar, the subway, and the express elevator; and that they could not have coffee for breakfast and most of the other things that they use during the course of the day were it not for the ships and trains that tie the many peoples and places of the world together commercially. It is obvious that if the wheels of transportation were to stop for a single day, the life of a modern society would be jeopardized and that if they were to stop for long, the members of that society would begin to die—as many did in postwar Europe when war-devastated transportation was incapable of bringing them food, medicines, and the other necessities of life.

Transportation and the Ecological Pattern.—The less obvious relationships between transportation and other aspects of social life have of recent years come under study by the social ecologists, with some slight help from the social geographers. The social ecologists are concerned primarily with the spatial distributions of the members of groups and with the spatial relationships of various groups.¹ This concern necessarily

¹ For discussions of the concepts of this special field of sociological study, see J. W. Bews, *Human Ecology* (Oxford University Press, New York, 1935); A. B. Hollingshead, "Human Ecology" in R. E. Park, *et al.*, *An Outline of the Principles of Sociology* (Barnes & Noble, New York, 1939); R. D. McKenzie, "Human Ecology" (*Encycl. Soc. Sci.*, vol. 5, pp. 314-315); J. A. Quinn, "The Development of

involves study of the role of transportation in the formation of various patterns of ecological distribution; for while transportation is not the sole factor, it is certainly one of the most important of the factors that determine the spatial relationships of the members of groups; and it is equally important in the determination of the frequency, if not the character, of the contacts that occur between members of various groups. As the means of transportation change, so too do all the various spatial aspects of social life.

PREMODERN TRANSPORTATION

Primitive Transportation.—Many primitives have been, and some still are, entirely dependent upon their own feet for transportation. They have walked or run wherever they were going, and they have carried their possessions on their backs. Such peoples have lacked techniques of transportation, unless the paths that they cut for themselves, their moccasins or sandals, and the packs that they used in carrying goods can be considered techniques. Transportation techniques are not, therefore, essential to social life, as are communication techniques. Man's organic equipment for getting around, poor though it may be by comparison with that of the four-legged animals, is sufficient for him to maintain a society.

Preliterate peoples have apparently developed few important devices to aid them in land transport. Some few primitives used animals as beasts of burden; but most primitives—those of Africa, those of the South Seas, and many of those of the Americas—walked and carried their own goods. In the matter of water transport preliterate peoples have done far better, perhaps because travel via water is next to impossible for man without some sort of craft, whereas travel on land can be done by foot. At any event, many primitives have known how to build and use small boats of one sort or another. The Eskimo, with nothing better at hand than hides and bone, built his amazingly seaworthy kayak. From the bark of the birch the Great Lakes Indians constructed a fragile but effective canoe, modern counterparts of which can be found on any American resort river or lake. Logs hollowed by hand or by fire were used by the primitives on the rivers of Africa, South America, and many other places. The primitives of the western Pacific made their dugouts seaworthy with outrigger and sails and used them for interisland transportation. These primitives are thought to have developed also a crude method of celestial navigation; certainly the seamanship that made it possible for them to

Human Ecology in Sociology" in H. E. Barnes, H. Becker, and F. B. Becker, *Contemporary Social Theory* (Appleton-Century, New York, 1940); L. Wirth, "Human Ecology" (*Amer. J. Sociol.*, vol. 50, pp. 483-488, 1945); and A. H. Hawley, "Ecology and Human Ecology" (*Soc. Forces*, vol. 22, pp. 398-405, 1944).

cross the vast expanses of water between many of the islands was unequaled by Westerners until late in the Middle Ages.

With kayak, canoe, dugout, outrigger, or other primitive means of water transportation, preliterate peoples have been able to fish and to travel on rivers, lakes, and even oceans, even as their land-bound brothers could hunt and travel the forest, plain, or mountain by foot. The development and use of these water transport devices enabled peoples to settle in regions, such as small islands, that would otherwise have been uninhabitable. These devices did not, however, mean also the development of advanced forms of social life. Like land-dwelling primitives, those who have traveled on water and relied on small boats for transportation have always been organized into small, compact tribal or village groups.

Premodern Water Transport.—The basic limitation of the kayak, canoe, or other small boat is its size, which precludes the transportation of any considerable amount of goods and, consequently, the concentrations of people that are always associated with civilized modes of life. The building of ships large enough, strong enough, and light enough to carry significant quantities of goods seems to have depended, in turn, upon the prior development of such fabricative techniques as the sawing of planks from logs and the manufacture of nails from either copper or iron.

With few exceptions, notably the Incas and Mayas of the Americas, early civilizations developed around water routes and involved the use of some sort of large watercraft for the transportation of goods. Until well into the modern period waterways were the favored means for the movement of goods within and between societies. A very close relationship has existed, therefore, between the techniques of water transport and the other aspects of culture. Before the beginnings of civilization in China, life centered around the unnavigable headwaters of the Yellow River. As the basic elements of Chinese civilization began to emerge (about 500 B.C.), the center of Chinese culture moved down-river to take advantage of the more fertile lands and the lowland waterways. Within a few centuries the various regions and peoples of China were bound together, not alone by a common written language but also by trade via river, canal, and coastal waters. The development and the exploitation of the pole barge, the sampan, and the junk were integral elements in the rise of Chinese civilization.

The Ship and Civilization.—In the West, likewise, the rise of early civilizations involved the development of efficient modes of water transport. The Egyptians made the Nile their main street. Early in Egyptian history most of the movement of goods was down-river by barge, as it was more than three thousand years later in the valley of the Mississippi and as it still is along the Amazon. The ecological pattern was that of a

sparsely settled upriver country, from which raw materials flowed down to the more densely inhabited region around the river's mouth. Only as sail-driven craft capable of moving heavy goods up-river developed was there a significant spreading of Egyptian culture and people along the entire course of the lower Nile. Here is perhaps the first clear instance in which one mode of transport led to a concentration of population and another to a relative decentralization of that population.

The varied ecological effects of different transportation techniques has subsequently appeared over and over in different societies. New Orleans, for example, was the cultural and commercial center of the Mississippi valley when all goods flowed down-river via barge and raft; it was pushed into a secondary position when the steamboat brought cheap upriver haulage and expanded the role of such upriver cities as St. Louis.

The Sumerians used ships of considerable size on the Persian Gulf as early as 7000 B.C., and by 1200 B.C. the Egyptians were using large sail and oar-driven ships on the Nile and the Red Sea. The civilizations of Crete, Greece, Carthage, and finally Rome depended largely upon water-transported goods and therefore upon the ship. Shipbuilding techniques reached a peak of development about the opening of the Christian Era and were not significantly improved upon until long after the arts of shipbuilding had been rediscovered in western Europe during the Middle Ages. The "Santa Maria," in which Columbus discovered the Americas, was fabricated in much the same way as had been the grain-transporting ships of Rome over two thousand years before.¹

Up to the Christian Era ship designing had not, however, kept pace with shipbuilding technology. The ships of the Romans, as those of the Egyptians had been, were shallow draught and propelled mainly by oar, an advantage in the frequently becalmed Mediterranean but a marked handicap elsewhere. Sails were used only for running with the wind, and the shallow-draught ships were so subject to adverse weather that it was the normal practice to follow coastlines by day and tie up in a harbor at night.

The invention of the deep keel, which permitted the sailing ship to move upwind by tacking and which gave the ship great stability and comparative security in storms, seems to have occurred in northern Europe sometime after the beginning of the Christian Era. About the eleventh century it was introduced to western Europeans by the Norsemen or some related people who, although they used the deep keel, did not construct ships of any considerable size. The Spanish, the Portuguese, and some other western Europeans combined the deep keel with the rediscovered arts of Mediterranean shipbuilding, so that by the fourteenth

¹ See C. Torr, *Ancient Ships* (Routledge, London, 1918).

century western Europeans had ships that were not only large and strong but were seaworthy, ships that could carry much goods or supplies for a long voyage and could also move by sail irrespective of the prevailing winds.

Navigation.—Except on inland waterways, use of the ship is rigorously limited by geographic knowledge and by the arts of navigation. Lack of the deep keel was not the only thing that had kept the Romans and their predecessors from venturing out onto the great ocean. (The Roman routes to the British Isles had been coastal.) The Romans had not had the geographical knowledge and the navigational skills essential to traveling far from land. The evolution during the Middle Ages of fully seaworthy ships coincided with the application of the magnetic needle to problems of navigation. The magnetic needle was apparently a Chinese invention, which was used by the Chinese, however, only as a device of magic, for the location of graves. In Europe the magnetic needle was developed into the compass; and this instrument, combined with seaworthy ships, gave mariners the confidence needed to begin the exploration of the world. By 1400 navigation by dead reckoning was an advanced art, geographical knowledge was beginning to expand, and the period of world exploration and exploitation was about to open. That period, and all that has come out of it, was compounded of many things, including the developments in production technology that had been occurring for some centuries and the revival of writing and the invention of printing, discussed in the preceding chapter. The invention of seaworthy ships, the magnetic compass, and the improvement in the arts of navigation were, however, vital factors; for without them the peoples of Europe could not have ventured out upon the Atlantic Ocean.

Premodern Land Transport.—Land transportation seems to have developed much more slowly than did the techniques of water transport. When and where man first conceived the idea of enslaving the lower animals and putting them to the task of transporting his goods and person is unknown. Although few preliterate peoples used animals as beasts of burden, all literate peoples, except perhaps the Mayas, have used beasts of burden to some extent or other. In most instances the beast of burden served as a supplement to highly developed water transport; it was used to move goods from the interior to port cities, and vice versa. A significant exception was the ancient "silk route" between Rome and the Orient, over which goods moved entirely by land via the backs of a variety of animals including man.

The Wheel and the Roadway.—The transportation of goods by beast of burden, or by the somewhat more efficient method of beast-drawn drag, has distinct limitations. Nothing can be transported that is very large or very heavy, and transporting goods over long distances by this

method is exceedingly slow. These limitations seem to have precluded long-distance trade via beast of burden in any but the most valuable things—silk, jewels, spices, etc. With the invention and application of the wheel these limitations were to a large degree overcome.¹ Thus with the wagon and their highly developed provincial roads, the Romans were able to draw upon most of the peoples of western Europe for their food supply.

The combination of the wheeled conveyance and the beast of burden, believed by some to have occurred first in central Asia and thence to have spread both east and west, was unquestionably a major event in the evolution of land transport. The horse or other domestic animal can pull on a wheeled vehicle many times as much goods as he can carry on his back or drag on skids. There is, however, an interesting functional interdependence between the type of wheeled vehicle (one-wheeled cart, two-wheeled chariot or surrey, four-wheeled wagon, etc.), the terrain over which it is used, the character of roads, if any, and the kind of draft animal. Under the Romans, road-building technology was highly developed, horses were used, and goods wagons were equipped with four small wheels. (Roman technology did not permit the construction of large-diameter wheels that were sufficiently strong, and it may have been this inability that led the Romans to develop the excellent roads on which small wheels could be used.) In the Orient, on the other hand, road building was taken very casually; heavy oxen were generally used for draft purposes; and the favored device for transporting goods on land was a cart equipped with two large wheels. Large wheels are less inclined to bog down in mud or dust than small ones, and they roll more easily over stones and other obstructions. This fact was gradually discovered by the early settlers in America, who initially used the horse and the small-wheeled wagon of Europe, without, however, having the hard-surfaced roads of Europe. The development of the large wheel with a wide, metal tire was an important factor in the settlement of the West; for until then travel was limited pretty much to water routes. Equipped with this tire, the famous Conestoga wagon and the later prairie schooner could move heavy loads over the roadless terrain.²

THE MECHANIZATION OF TRANSPORT

The opening of the oceans to sailing ships during the latter Middle Ages and the development of trade between Europe, the New World, and finally the Orient imposed new demands upon the sailing ship. To meet

¹ For historical data, see N. L. Gold and M. M. Knight, "Ancient, Mediaeval and Early Modern Roads" (*Encycl. Soc. Sci.*, vol. 13, pp. 400-403); and K. Wiedenfeld, "Transportation" (*Encycl. Soc. Sci.*, vol. 15, pp. 81-90).

² See I. D. Paden, *The Wake of the Prairie Schooner* (Macmillan, New York, 1943); and O. O. Winther, *Via Western Express and Stage Coach* (Stanford University Press, Stanford University, 1945).

the needs of longer voyages and larger cargoes (or, for men-of-war, larger crews and heavier guns) development was for a time in the direction of larger ships. During the latter half of the eighteenth century, however, economic rivalries, particularly the endeavor of shipmasters to be first back to Europe and America with the season's tea crop from China, led to a shift in emphasis from size to speed. By the middle of the last century the search for a speedy craft had culminated in the narrow-beamed, deep-draught clipper ship.¹

Meanwhile the constant increase in the flow of ocean-borne goods and persons placed a severe strain on the internal transportation facilities of England, the Continent, and America. The cost of bringing tea from the Orient to London by ship was, for example, less than the cost of hauling that tea from London to the outlying towns by wagon. This technological disequilibrium led to some improvement in wagon design, and here and there some attention was given to road building and maintenance. But until the advent of the railroad, the only significant innovation was the combining of the draft animal and the boat to make the horse-drawn river and canal barge.

The Steamship and Intercontinental Organization.—The first useful steam engine was developed in England in 1698 by Thomas Savery. It was first applied to the powering of factory machinery, where it took the place of the water wheel. Many attempts were made to join the steam engine and the wagon to provide a mechanized means of land transport, and in this way to advance land-transport technology to the level of water-transport technology. The first successful mechanization of transport actually occurred, however, in water transport. Early in the nineteenth century the steam engine, the water wheel, and the ship were united to produce the paddle-wheel steamboat.²

Insofar as ocean transport was concerned, the application of the steam engine to ships did not so much displace as supplement sail; indeed, sail and steam were often combined in a single ship. The advantage of steam propulsion was greater speed, mainly because the steamship, unlike the sailing ship, did not have to tack going upwind or crosswind and because it did not lose time when the wind failed. But the early steamships had many disadvantages; they were dirty and mechanically unreliable, and their fuel consumption (initially wood and later coal) was so great that they could not be used in the long haul to the Orient.

¹ See A. Laing, *Clipper Ship Men* (Duell, New York, 1944).

² For further material on the evolution of the steamship and its effects upon trade and social life in general, see A. Berglund, *Ocean Transportation* (Macmillan, New York, 1931), and "Shipping" (*Encycl. Soc. Sci.*, vol. 14, pp. 30-43); J. T. Flexner, *Steamboats Come True* (Viking, New York, 1945); and S. C. Gilfillan, *Inventing the Ship* (Follett, Chicago, 1935).

The steamship was soon put to use, however, for trans-Atlantic passenger traffic and for passenger and freight haulage on inland waterways. In both these roles the steamship was much superior to the sailing ship; it could keep to a schedule, which was important for the passengers, and it could make good progress up-river against the current and wind. By the middle of the century, therefore, most passenger ships on the Atlantic run and practically all the river boats in America and Europe were steam propelled. The steamship played a particularly significant part in the subsequent settlement and exploitation of the North American continent; steamships brought millions of immigrants to America from Europe, and river steamboats made the Mississippi and our other great rivers safe and efficient highways. As was indicated earlier, the rise of such inland trade centers as St. Louis was directly related to the development of steam-powered river boats. At the same time, the importance of Boston and other old Yankee ports as places of entry for immigrants was lessened, for with the coming of trans-Atlantic steamships New York became the center of passenger traffic. In a great variety of other ways the advent of the steamship influenced the settlement of peoples and the location and relative importance of cities in America during the latter half of the nineteenth century. No comparable influence appeared in England or on the Continent, mainly because the ecological pattern had already become traditionalized and the uses to which the steamship was put were determined by existing spatial and trade arrangements rather than the other way around.

Continuing technological developments, most notably the substitution of the screw propeller for the cumbersome paddle wheel and the substitution of iron for wood in the construction of the hull, greatly increased the range and efficiency of the steamship; and by the close of the century steam had displaced sail in the transport of freight as well as passengers. As with every important technological advance, the mechanization of water transport freed man from dependence upon nature—in this instance the wind and currents. Fixed and regular routes and schedules could be maintained, something that had been impossible with the sailing ship; and the systematization of water transport in turn permitted the development of elaborate and systematic organization of waterborne commerce. Organization of commerce, together with the comparatively low cost of transport by steamship, greatly encouraged the growth of intercontinental trade, the division of labor, and the interdependence of countries. Even today, with our highly developed modes of land transportation, it is easier and cheaper to move goods across oceans from country to country than to move them from city to city within a country. Were it not for political and other restrictions upon the movement of goods, the low cost and reliability of ocean transport would

have furthered international commerce at the expense of domestic commerce.

Recent developments in ship technology have been in the nature of refinements rather than innovations. Oil has generally replaced coal as a fuel, the steam turbine has partially displaced the reciprocal engine and has made for greatly increased efficiency, and the top speed has constantly been pushed upward. Such improvements have somewhat intensified the ecological consequences of the coming of the steamship, but they have not changed them.

The Railroad and Internal Organization.—The mechanization of land transport began with the railroad, which is in essence a combination of the steam engine and the wagon on fixed rails instead of the conventional earth or gravel road. Although it came into use after the steamship, the railroad was developed and exploited much more rapidly, probably because the need for better land transport had become urgent with the development of large-scale sea-borne commerce. At any event, once the feasibility of the railroad had been proved and the inevitable resistance to a new technological device had been broken, the building of railroads became something of a preoccupation with all Western peoples.

The railroad began to be an important factor in European transportation by 1830 and achieved comparable status in heavily settled regions of America a decade or so later.¹ Initially the railroad served mainly as a replacement for inland water transport (early lines were often built on the water-level barge paths); and in this role it improved the commercial ties between established cities and so furthered the growth of these cities. Toward the middle of the century, however, railroad lines were being built over, through, and around mountains—everywhere, in fact, that a need for rail transportation existed or might conceivably develop or be developed. So great was the faith in the economic magic of this new device that in America and other new lands railroad lines were sometimes built with a total disregard for transportation needs. By the end of the century, Europe and the United States were interlaced with networks of lines, many of which have since been abandoned.

The vogue for railroad building, rather than just the technique of the railroad itself, introduced a variety of new factors into the spatial distribution and relations of modern peoples. For one thing, railroads were built through rather than just to established cities, so that cities were tied together in transport chains. At points along these chains many new cities developed, some of which in time outgrew the older ones in importance. In many instances the linkage of cities—such, for example, as the connecting of Chicago with San Francisco—encouraged the estab-

¹ A brief history of the railroads is to be found in I. L. Sharfman and S. Peterson, "Railroads" (*Encycl. Soc. Sci.*, vol. 13, pp. 74-93).

lishment of way stations that grew into towns, the settlement of lands along the rail lines, and the exploitation of natural resources, such as minerals, that had formerly been inaccessible. In many instances, moreover, the overbuilding of railroads led to artificial inducements to settlement and community development. Two lines were run into Los Angeles, for example, while that place was still a village. Because there was no existing demand for their services, the railroad companies built hotels and other facilities, propagandized throughout the East the recreational advantages of the Los Angeles area, ran special, low-cost tourist trains to Los Angeles, and otherwise encouraged the development of a city in that location.

Economic Nullification of Space.—The railroad has done much to lessen the physical significance of space on land. Fully as significant sociologically as the physical aspects of railroad technology is an economic factor that the railroad companies brought to the field of transportation. The competition for traffic that followed the overbuilding of railroad lines both here and in Europe led to a new principle of rate making. Freight and passenger tariffs on both land and sea had been closely related to cost—i.e., the heavier the goods and the further the haul, the higher the rate. Under this system only light and valuable goods could move in trade over long distances. Before the boom in railroad building, the economic structure of each country had reflected this cost principle.

Under the pressure of competition the railroads evolved and came to operate on the principle of charging what the traffic would bear, irrespective of cost of haulage. The result was that a city that happened to be served by competing lines enjoyed exceedingly low freight rates while the city or town served by only one line was burdened with excessively high rates. Moreover, under this system the rates on various kinds of goods came to have no relation to the cost of moving them. The freight rate on heavy, low-value materials was often but a fraction of that charged for light, high-value goods; and passenger rates for long distances were often lower than those for short distances. The social and economic consequences of such differential rates have never been fully appreciated. The general effect was that of reducing the economic significance of distance. Coal that was mined next to a consumption center, for example, was "taxed" in order that coal mined at a distance could compete with it on terms of equality; and the charge for hauling goods from New York to Salt Lake City was, and still is, higher than the charge for hauling the same goods all the way to San Francisco. Many of our present cities and many commercial practices were originally made possible by this economic, as distinct from technological, nullification of the effects of space.

The Streetcar and the Elevator.—Horse-drawn trams traveling on fixed rails appeared in European cities shortly after the introduction of the

railroad.¹ They were a considerable improvement over the lumbering passenger wagons that they superseded, for the city streets of the time were generally unpaved. The trams were, however, slow, and the effective size of a city was more or less limited by the time required for those who worked in the center to reach the residential sections on the outskirts.

Many factors, including the growth of trade and commerce that was brought by the rise of the factory system, the declining need for labor on the farms, and the introduction of the railroad, fostered the growth of cities beyond the point where trams and other horse-drawn means of transportation were adequate; and the acute and continually growing need for rapid urban transport led to a variety of experiments. Steam was tried, for example, but was abandoned because of the fire hazard in congested and highly inflammable cities. No real solution to the problem of urban transportation was found, however, until 1887, when the first successful electric railway was constructed. The electric streetcar then broke the passenger-transport bottleneck, thereby greatly increasing the feasible size of cities and fostering the development of the suburban pattern, in which residential areas are distinct from the metropolitan or working region of a city and often separated from it by a considerable distance.²

By the end of the century every large town and city in western Europe and America was crisscrossed by streetcar lines, and many populous centers were connected by interurban lines. In the great cities, however, the congestion at the centers was, if anything, increased; for the ease of getting there increased the flow of people into the centers of the cities. In London congestion became so great that ultimately car lines were run under streets, rivers, and buildings. Paris and a number of other great cities soon adopted the underground technique. In America the preference was initially for overhead rather than underground lines. Very few American cities have, however, built any form of rapid transit, and the problem of continually increasing congestion at the centers of our cities remains unsolved.

Closely linked to the development of the streetcar was that of the electrical elevator, which did for the height of buildings what the streetcar did for the size of cities. Prior to the advent of the elevator, four or

¹ For the evolution of the streetcar, see P. Blanshard and H. J. Rosner, "Municipal Transit" (*Encycl. Soc. Sci.*, vol. 11, pp. 118-127).

² Much descriptive material on the importance of transportation (and communication) techniques to the development of modern cities can be found in C. Bridenbaugh, *Cities in the Wilderness: The First Century of Urban Life in America, 1625-1742* (Ronald, New York, 1938); B. L. Pierce, *From Town to City, 1848-1871*, vol. II of *A History of Chicago* (Knopf, New York, 1940); and A. M. Schlesinger, *The Rise of the City, 1878-1898* (Macmillan, New York, 1944).

five stories was the maximum feasible height for buildings, even those located in the most congested areas. The elevator made the sky the limit, and the building of skyscrapers was undertaken in America with something of the same zeal and disregard for social need that had characterized the building of railroads fifty years before.

Marked changes in the distribution of urban populations have frequently resulted from the building of skyscrapers. On the one hand, the skyscraper makes for efficient concentration of business organizations by greatly facilitating the movement of persons within a given organization and between various organizations in the same trade; thus a quick trip to the next floor replaces the preskyscraper walk down the block. On the other hand, the skyscraper increases the congestion of persons in metropolitan centers and imposes a further burden on streetcar and other horizontal means of transport.

INDIVIDUAL TRANSPORTATION

The steamship, the railroad, and the streetcar permit fast and economic transit of goods and persons on a mass basis; but since they must be operated on fixed routes and schedules, they do not fulfill the need for individual transportation—for the doctor who must make a hurried call in the night, the boy and girl who want to go wandering about the countryside, or the man who has an appointment with a friend at a certain time and place.

Until the advent of mechanized personal transportation devices, the individual who wished to reach a place that was not conveniently served by public transport walked or, if he could afford it, drove his own horse and buggy or hired a horse-drawn cab. Well on into this century the horse and buggy remained the basic means of individual transportation both in country and city. Particularly in the larger cities, the maintenance of this technological anachronism resulted in a great variety of inconveniences. The private owner of a horse had to live on a relatively large piece of highly valuable land in order to keep the stable at a sufficient distance from the house, or else he had to stable his horse in a commercial establishment some distance from home. Moreover, the horse and buggy or the cab, although it could travel any streets at any time, moved slowly in comparison with mechanized mass transportation. And the presence of horses in congested urban districts imposed an unsolvable problem of public health; for where there are horses, there are disease-bearing flies.

The Bicycle.—The bicycle appeared as a sporting device in the 1860's. Within twenty years it was developed into a useful and widely used means of individual transportation, the first mechanical supplement to the individual's own legs. Over reasonably good roads, the bicycle increases the range of individual movement at least fourfold. Thus for the

boy with a bicycle the effective size of his home town is only about one-fourth of what it would be if he traveled to school, to join his playmates, to go on errands, etc., by foot.

Initially, the bicycle tended to serve the poor man in much the same way that the horse and buggy did the man of means; *i.e.*, it freed him to some extent from dependence upon public transport. But even in Europe, where the bicycle has continued in general use by adults as well as children and in peacetimes as well as wartimes, the bicycle has probably not done much to change the distribution of urban or other populations. Certainly it has not had any such consequences as those brought by the streetcar or the automobile. Riding a bicycle may be more efficient than walking, but it is at best only "walking sitting down."

The Automobile and Individual Mobility.—The introduction of the automobile satisfied an existing need for mechanized individual transportation and at the same time set up social disturbances of great intensity and wide ramifications. The desirability of a mechanically powered wagon or buggy had long been recognized, and many and various were the attempts to link the steam engine with the buggy. The solution to the problem of mechanical individual transportation waited, however, upon the development of the internal-combustion engine, which, it will be recalled, was a development fostered by the availability of gasoline.

In the late 1870's the internal-combustion engine was joined with the buggy and certain power-transmission devices that had been developed for industrial use.¹ By the turn of the century the automobile had been developed to the point where it was attractive to well-to-do young men of adventuresome inclination. For the next ten years or so it was the plaything of city playboys and the bane of sensible people. During the subsequent ten years it became a sufficiently reliable means of transportation to displace the horse and buggy and the horse and cab to a great extent in American cities and to a lesser extent in England and on the Continent.

General and socially significant usage of the automobile, however, waited upon the construction of usable roads outside town and city limits and the development of mass-production techniques. The latter came first, at least in America, and is generally credited to Henry Ford, whose "Model T" was purchased by millions who had never previously owned any means of individual transportation and by millions of others as a substitute for their horse and buggy or horse and spring wagon.

¹ For some years a refined steam engine and the electrical motor vied with the internal-combustion motor as a source of power for the automobile. Once the weight of technical opinion gave it preference, the internal-combustion motor received the benefit of concentrated attention and developed with great rapidity. For all that one can tell, the steam engine might have done as well or even better had it received equal attention. For a pictorial history of the automobile, see F. Clymer, *Historical Motor Scrapbook* (published by the author, Los Angeles, 1944).

Ford was the first to attempt to build a simple and cheap automobile for the common man. All previous builders had thought of the device as a rich man's toy. Ford's success, which became evident as early as 1915, led to a complete reorientation of the automobile industry and, incidentally, to a concentration of automobile building in the hands of a few corporations.

With an increasing number of automobiles on the roads, the inadequacy of existing road facilities became a matter of public concern.¹ Gradually roads were built between towns and cities; even more gradually road design, construction, and routing were adapted to the needs of the automobile. There has been much talk in America of redesigning municipal street systems; but, aside from a very few parkways, the only important adaptation of the city plant to the automobile has been the widening of streets and the introduction of elaborate traffic controls. The latter are in the nature of palliatives.

Until about 1920 the automobile, even in the United States, served mainly as a replacement for the horse-drawn passenger vehicle. As the mechanism became more reliable and cheaper and as a usable road system developed, it began to serve as a primary means of recreation as well as a supplement to and a substitute for public transportation. Traveling for the sake of travel became something of a vogue. As a consequence, a tremendous increase in individual mobility occurred; and since people could travel more or less at will, social practices and relationships based upon recreational travel soon developed. The countryman began to come to the city to shop and secure his recreation, the city man began to go to the mountains or seashore for his vacation, etc. The effects upon the existing social structure were, and still are, revolutionary. Some of the more important of these consequences will be discussed later in this chapter.

The Truck and its Effects.—What the automobile has done for the transportation of persons, the truck has accomplished for the movement of goods. The truck was first used as a substitute for the horse-drawn dray, cart, and wagon by which goods had been transported about city streets. As highways came into being, trucks tended to replace the farmer's heavy wagon (even as the automobile replaced his spring wagon). Finally, intercity shipment of goods by truck was introduced. This new mode of freight transport gave the shipper, both large and small, an independence from the fixed routes and schedules of the railroad, just as the automobile had given the individual freedom from streetcar lines and railroad timetables.

¹ See J. W. Gregory, *The Story of the Road* (Allen & Unwin, London, 1931); G. Sheldon, *From Trackway to Turnpike* (Macmillan, London, 1928); and H. R. Trumbower, "Modern Roads" (*Encycl. Soc. Sci.*, vol. 13, pp. 403-411).

Truck transport has tended to bring within the web of goods transportation the many towns and villages that, located away from railroad routes, would otherwise be more or less isolated. To this extent the truck has reduced the ecological significance of the railroad itself. The truck has also brought about an economic and in some respects social interdependence between the city and its immediate hinterland. Before the truck, the area of a city was rigidly defined by streetcar terminus and railroad lines; a few minutes' walk beyond the end of the car line or railroad substation, urbanity stopped and ruralness began. Just as the automobile made it possible for city workers to live a considerable distance outside the city proper, the truck enabled farmers to produce for and sell in the city; and vegetable gardening, dairying, etc., grew up around each city to supply the city dwellers, via truck, with fresh produce, of which they had had little when the wagon and the railroad were the sole means of land transport. At the same time the towns and villages in the hinterland became more directly dependent upon the city; for with the truck such food processors as the city baker were able to enlarge the area to which they made frequent deliveries. Thus in contemporary America few small towns near cities are supplied exclusively by their own bakeries, and even farm wives are likely to obtain their bread from large, industrial-type bakeries located in the cities. In these and many other ways the truck has tended to lessen some of the economic distinctions between urban and rural communities and to increase the dependence of each upon the other.

The Airplane and the Mobility of Persons.—The steamship, the railroad, the streetcar, and the automobile are two-dimensional transport devices; they move along one plane, the surface of the sea or the earth. Long before the development of any of these devices men had been endeavoring to discover some means by which they could use the air as a medium of travel and so obtain a three-dimensional transportation device. In the West various attempts had been made to emulate the bird; in China experimentation took the form of kites. Late in the eighteenth century ascension by means of the gas-filled balloon became possible. The balloon was ultimately developed into the power-driven dirigible airship; but the smallness of the pay load that airships can carry and the frequency with which they have met with disaster have discouraged their exploitation, even for military purposes.

At the opening of this century the feasibility of flight by heavier-than-air craft was demonstrated by the Wright brothers. There followed a quarter of a century of developmental work, considerably intensified by the use of airplanes in the First World War. By 1925 the airplane was sufficiently reliable and powerful to be put to commercial use. Aided by governmental subsidy (justified on military grounds), airlines de-

veloped; and within a decade travel by air was reasonably safe and comfortable. By that time most of the larger cities of the United States and of the various countries of Europe were linked by air routes, and a beginning had been made in the development of international routes.

The extensive use of airplanes during the recent war unquestionably accelerated technological development, particularly in the direction of larger and faster craft. It also led to the exploration by air of much of the globe, the construction of a multitude of landing fields, and the acquisition of air-transport know-how. The end of the war left the United States, and to a lesser extent Britain and Russia, with a vast supply of leftover airplanes, some of which were convertible to passenger and freight use, with a huge capital plant for the production of new airplanes, and with an immense number of men who had been trained to build, fly, and service airplanes. These by-products of war have furthered the exploitation of this new means of transportation and will continue to do so. Whether in coming into its own air transport will in any significant measure replace the steamship, the railroad, and the automobile is unknown, although the prophets of the air age freely claim that air transport will have as revolutionary effects upon peacetime life as it already has had upon warfare.

The special virtue as a transportation device of the airplane is speed. For land travel it has also the virtue of requiring neither road nor rails, although this advantage is somewhat offset by the need for large and costly landing fields. The present disadvantage of the airplane is cost, whether that cost be reckoned in terms of money or in terms of human effort and material resources. No aircraft yet built can compete on a financial basis with the steamship in transoceanic transportation of goods or with established railroads or motor transport in transcontinental transportation of goods over established routes. Economically, the principal function of the airplane would seem to be the transportation of persons over long distances, for here and here only the advantages of speed outweigh the disadvantages of air transport.

The future development of air transport will not, however, be determined by economic factors alone. For reasons of national prestige and military security most nations will no doubt continue to subsidize their air lines; and under such subsidy the airplane will no doubt be used on a considerable scale for the transportation of light, valuable goods and for people who are in a hurry or who just happen to prefer the plane to the train. In all probability the airplane will not soon play a significant role in the mass movement of either goods or persons; and until and unless it does, its effects upon the distribution of populations and their interrelations will be of a minor order. Certainly the fact that the airplane is not suitable for short-haul use precludes its general adoption by

individuals as a substitute for or even supplement to the streetcar and automobile. The picture of the urban worker of the next few years commuting from his garden-city home by airplane to the metropolitan shop or office building is pleasant but unrealistic. The commuter will for long continue to ride on such mass movers as the streetcar, the bus, and the subway car, which may someday provide him with the comfort and speed that are now technically possible, or in his old-fashioned, earth-bound automobile.

TRANSPORTATION AND THE CONQUEST OF TIME

Historically, a very close relationship has existed between the uses to which transportation techniques have been put and the existing techniques of goods preservation. Most of the things that men might transport, their tools, the materials from which they construct their habitations, their clothing, their food, etc., are subject to deterioration through time. Iron tools will rust away unless they are in some way water-proofed. All organic materials—and in any society organic substances are used to feed, clothe, and often house the members—are normally subject to destructive attack by molds, yeasts, funguses, insects, rodents, and other organisms. Anything that will nourish man will also support a great variety of vegetable and animal organisms. All the natural fibers—hemp, cotton, wool, silk, etc.—are delectable fodder for some and often many organisms. Leather is attacked by a variety of molds, fur by moth larvae, and pulp paper, fiberboard, etc., by silver fish or book-worms.

Since most of the things that men use and live by and might wish to transport from place to place normally deteriorate through time, some very rapidly, the variety of things that men can transport or hold for future use is limited by the techniques of preservation. Only to the extent that man can conquer time, in this sense, can he bring from a distance what he does not himself produce and can he travel from place to place taking with him the necessities of life.

Because of their transportation techniques and their social organization the Romans were able to bring grain from the most distant provinces, for grain keeps fairly well before milling. They could not, however, bring from a distance the meat, vegetables, and fruits that are necessary for an adequate diet; and when the population of Rome grew beyond the numbers that could be supplied with these perishable foods from near-by sources, the Roman diet must certainly have suffered. The early modern explorers were previously hampered by the inadequacy of their food-preservation techniques. After a few weeks at sea their bread became weevily, their oil rancid, their wine sour, and even their water grew slimy with algae. The length of a journey by sea was ultimately

limited by the time that the sailors and passengers could survive on such fare. Malnutrition and starvation were by far the greatest hazards of premodern travel by sea. Even so late as the days of the clipper ship, scurvy was the normal lot of the sailor; and the discovery that bottled lime juice prevented scurvy was as important to the maintenance of the British Navy during the last century as was the invention of the breech-loading cannon. Ships as well as food deteriorate through time; in the days of the sailing ship, sails often rotted out during the course of a long voyage, sea life ate into the wooden hull, and barnacles encumbered it.

Travel by land has not always been so dependent upon ability to preserve food and materials. In many instances the traveler could live off the land; and, at least when he went on foot, he did not need to protect his equipment, other than his shoes and clothing, from the deleterious effects of time. In those instances when no food could be secured en route, land travel was as difficult and as much limited by food-preservation techniques as was sea travel. In their attempts to cross the Great Plains the early American pioneers, for example, often suffered disaster because they either ran out of food or their food supplies became unedible.

Hand-to-mouth Living.—All peoples have had some methods, however crude, of preserving some of their food and protecting some of their goods from deterioration. Few social groups could live through the cycle of the seasons unless they were able to do so. Many primitives have had techniques of sun-drying or fire-drying fish or meat and in a few instances fruits; and agricultural peoples have usually known how to dry-store their root crops and grains. Preservation by salting was also known to many primitives; but, except for those who happened to live near natural salt deposits, salt was too scarce and valuable to be used for this purpose. The preservation of hides and furs, used for clothing, tents, and other purposes, usually involved nothing more complex than scraping, stretching, and drying; leather, as we know it, is a product of civilization.

In general, primitive preservation techniques have been only just adequate to sustain the group through a single unproductive season; and one may suspect that even under the best of conditions the diet of peoples who lived in the more rigorous climates was unpalatable, monotonous, and nutritionally unbalanced. They lived in the main from hand to mouth, from day to day, or at the most from year to year.

Premodern Techniques.—Civilization, with its concentrations of populations and traffic in goods, including food, is dependent upon fairly advanced food-preservation techniques. The mainstay of the civilizations of antiquity was grain and in Egypt, Greece, Rome, and other Mediter-

anean societies olive oil and wine. (The making of wine is, incidentally, one of the oldest food-processing techniques; made into wine, fruits that would otherwise quickly spoil are "preserved" for use throughout the year.) Meats and fish, when preserved at all, were dried and salted. The making of cheese, which is a method of preserving milk, was evidently known to most of the peoples of antiquity; even the nomadic tribes of central Asia knew how to make a cheese of sorts. The Chinese, and through them many other Oriental peoples, developed rather elaborate food-preservation techniques. Meats and fish were smoked as well as dried and salted; eggs were preserved in fine earth (where they changed character but remained edible); rice was husked and polished—with considerable loss of food value—so that it would not become weevily; the oil from soybeans was extracted and stored.

Food Preservation and the Rise of the Modern City.—Whether or not the Roman food-preservation techniques fell into disuse during the feudal period is not known. The people of medieval Europe could not, at any event, preserve meats; and as the populations of the medieval cities increased and trade and travel developed, an intense need for better food-preservation methods apparently arose. It was, for example, during this period that the demand for spices from the Indies led to the endeavor to find a water route to the Orient. Spices were wanted either as preservatives or as a camouflage for foods that had not been adequately preserved; most probably they were used for both purposes.

By the beginning of the modern period a considerable number of preserving techniques, some old and some new, were available. In addition to those already mentioned was the salting of butterfat and the storage of foods in icehouses in those regions where natural ice could be harvested during the winter. But the growth of trade and travel over long distances and most particularly the rise of large cities dependent for their food upon distant sources encouraged, indeed in the long run necessitated, the development of still more elaborate food-preservation techniques.¹

Sterile Canning and the Winter Diet.—The preservation of food and of all organic materials is a matter of biological control, the major aspects of which have been treated in a previous chapter. It will be recalled that the technique of heat sterilization grew out of the scientific discovery that microorganisms are responsible for the appearance of molds, rot, and other forms of organic deterioration. The application of heat sterilization to the preservation of food (canning), now taken so much for granted, was one of the more significant innovations of the last century. It revolutionized the food habits of modern people; it enabled a

¹ See W. P. Hedden, *How Great Cities Are Fed* (Heath, Boston, 1929); and "Refrigeration" (*Encycl. Soc. Sci.*, vol. 13, pp. 196-200).

fuller exploitation of the new techniques of transportation; and it did much to improve the dietary standards of modern people, particularly those who live in cities.

By the end of the last century food canning had become a common household practice, particularly in America. By canning, housewives in both town and country could preserve fruits and vegetables for winter consumption and thus provide for the household a more varied and a much better balanced diet during the winter than had ever before been possible in temperate climates. Soon food canning became commercially feasible, and this in turn led to long-time commercial storage, long-distance transport, and large-scale distribution of preserved fruits, vegetables, meats, and milk.

The Refrigerator Car and the Urban Diet.—As has been indicated, refrigeration of food by natural ice is a fairly old technique. The use of the icehouse or icebox for food storage had been limited, however, to those regions that were cold enough to provide a good crop of natural ice during the winter. By the end of the last century artificial ice was being widely used in American cities, primarily for the storage of meats and secondarily for domestic use in warmer regions.

The ability to store meats and other perishables, particularly on a commercial scale, tended to smooth out irregularities in urban supplies of these foodstuffs, but it did not otherwise affect food habits and food-distribution procedures. With the invention of the refrigerated ship (about 1880) and the development of the refrigerator car a decade or so later, food production, distribution, and consumption practices of most of the peoples of the West were revolutionized. The refrigerated ship, for example, enabled insular and heavily populated Britain to obtain significant quantities of fresh meat, vegetables, and fruit from as far away as Australia. The refrigerator car had comparable consequences in America. Previous to its development meat animals, for example, had been moved to market on the hoof—either driven to town or city in herds or shipped in cattle cars; and every town and city had its own slaughterhouse. With the refrigerator car, large-scale, centralized (as in Chicago and St. Louis) meat processing became possible. The growth of large packing houses in turn led to economies in processing and the development of a wide variety of by-products, to the end that nothing that might conceivably be used was lost. And local markets became independent of local suppliers; they could and did draw upon the entire country for their meats.

The most recent development in refrigeration, the technique of quick freezing of meats, vegetables, and fruits, is in the nature of a refinement; it permits longer storage and a somewhat better preservation of texture and flavor. This refinement, combined with the development of the

household mechanical refrigerator, is tending to a considerable extent to replace sterile canning, particularly in the preservation of fruits and vegetables.

The over-all effects of the development of refrigerated transportation have been a lessening of the dependence of city populations upon the immediate hinterland for fresh foods (an effect that is partly canceled by the growing dependence that was introduced by the truck), a great increase in the variety and an improvement in the quality of the fresh foods available to urban peoples, and a marked increase in regional specialization in food production. Today the best and largest variety of fresh foods is to be found not down on the farm but in the markets of the great cities; and for most of the year most farmers are dependent upon city markets for such fresh produce as they get.

TRANSPORTATION, TECHNOLOGY, AND TRADE

The development of all the modern transportation devices and preservation procedures has been directly dependent upon improvements in technology as a whole. Conversely, each development in transportation and preservation technology has in one or a number of ways encouraged new forms of trade and further changes in production technology.

Most of the technological developments of the past few hundred years have implied an increasing division of labor, with greater specialization of worker or work group in a single productive activity. Specialization is possible, however, only when the specialized worker can exchange what he produces for the various goods and services that he wants or needs. Trade, in other words, is essential to any division of labor and thus to the technological developments that make for an increasing division of labor. And trade, in turn, means transportation and, for many goods, preservation. Technology, specialization, trade, and transport are consequently all inseparably interwoven. As the means of transportation and preservation are improved, trade is increased (provided that ideological or organizational barriers do not interfere), specialization in production is encouraged, and existing techniques are exploited to the fullest.

Moreover, by fostering specialization, trade tends to encourage technological development. The man who does nothing all day but stitch soles on shoes is somewhat more likely to hit upon a simpler method of stitching soles than is the shoemaker who makes shoes in their entirety. Likewise a locality devoted largely to the making of shoes is considerably more likely to contribute improvements to shoemaking technology than is one in which shoes are only one of many concerns. In agricultural production, too, regional specialization, dependent upon trade, encourages technological improvement. Historically, therefore, specialization in production, production technology, and trade have gone hand

in hand, now one and then the other running, as it were, somewhat ahead of the others.

The relationship between trade and transportation is a complex but close one. Except when people are migrating, as in the settling of new lands, all transportation of goods is a means of effecting trade. Transportation is, in this sense, trade in process. The kinds of things that will move in trade and the directions and distances that they will move are limited by the existing transportation technology and, to a lesser degree, by the existing preservation techniques. When goods cannot be moved across ocean, desert, or mountain, there will be no trade—and hence no division of productive labor—between peoples who are separated by ocean, desert, or mountain. When transportation permits peoples to trade with one another, each will tend to specialize in production and to improve its production techniques.

Transportation, Trade, and Cultural Diffusion.—The importance of cultural borrowing and of cultural contacts was indicated in the discussion of the processes by which a culture evolves. The importance of transportation technology to such contacts should now be evident. A people who because of their physical location are culturally isolated under one transportation technology may become, as did the people of England with the rise of ocean transport, a host for all the world.

Historically, trade that has arisen on the basis of new modes of transportation has been a significant factor in the diffusion of cultural elements. Many of the developments in medieval European culture stemmed at least indirectly from the borrowing from the Orient of such techniques as gunpowder, the compass, and paper money; and that borrowing was a by-product of the growth of trade with the Orient in spices, silver, silk, etc.

Although trade within a given cultural area does not, of course, necessarily involve the diffusion of cultural elements, it more often does than does not. During the last century trade between rural and urban segments of modern populations fostered the spread of urban ideas and practices from the urban center to the rural hinterland, largely via the agency of the itinerant peddler and later the traveling salesman. Trade between peoples of distinctly different cultures may or may not lead to an interchange of nonmaterial cultural elements. The goods that are exchanged are themselves of cultural origin, and possession of them usually, although not always, implies culturally designated modes of usage; to that extent, then, all trade affects the culture of the recipients. But the extent to which other techniques, knowledges, sentiments, etc., go along with the goods that are exchanged depends upon many factors, including the technique of trade itself.

Dumb Barter and Chain Trading.—Some types of trade, such as dumb barter, a trade procedure in which the traders do not meet, actually preclude cultural diffusion. For social reasons, rather than transportation difficulties, some primitives have effected exchanges by leaving goods that they wished to trade at a traditional place and time and then withdrawing while the members of another tribe deposited, on a take-it-or-leave-it basis, goods that they were willing to exchange for those set out by the first tribe. Since there is no contact of person with person, nothing "moves" except the goods that are exchanged; and the cultural integrity of each group is undisturbed. As recently as the First World War, dumb barter was used to effect exchanges of soap and bread and other things between German and Allied troops. Apparently dumb barter is a characteristic mode of resolving the conflict between out-group antagonisms and the desire to possess goods that only the out-group can supply.

In chain trading, another kind of trade that does not ordinarily involve cultural diffusion, goods and persons cross cultural lines; but each crossing involves a different trader and transporter, with the result that the final recipient meets only the last of the chain of traders and from him learns little, if anything, of the people among whom the goods originated. Chain trading was fairly common throughout premodern times. There was, for example, a considerable movement of goods among the various peoples of Africa; but each people knew about only their next-door neighbors, and in spite of the trade in metals and other substances there was little cultural diffusion.

The silk-route trade between the Chinese and the Romans provides the clearest illustration of trade without cultural borrowing. The silk route was actually a trade chain along which silk and some other precious goods moved from China across all of central Asia and eventually to Greece and Rome, gold and some other materials moving in the reverse direction. Roman and Chinese never met; and all that each ever learned about the other was the vaguest of rumors that were passed, like the goods, from person to person along the chain but, unlike the goods, were distorted in the passing. The early medieval spice trade with the Orient was also chain in type; and what Europeans learned about the Orient via this trade was so distorted that as late as the opening of the fourteenth century they damned Marco Polo's eyewitness account as romancing. Where transportation facilities are crude and inefficient and knowledge of geography and peoples is restricted, chain trading is the only means by which goods can go far from their point of origin; and with the goods goes little else.

Intercultural Trade.—The type of trade that is most favorable to the diffusion of ideas, knowledge, and practices is that in which the goods

are taken from their point of origin to their destination by representatives of the culture of the producer. In this type of trade the transporter is a bearer of culture as well as goods and a borrower of culture that may be carried back to his homeland. This type of trade may be described, therefore, as intercultural trade.

The developments in transportation technology that began during the Middle Ages have fostered trade of the intercultural type. First by sailing ship and later by steamship, Europeans began to go to every land that could be reached by water; where they went they took their culture, from which non-Western peoples could and in one way or another did borrow; and when they returned to Europe, they brought with them some word, some knowledge, some opinion, or some practice that might be added to the cultural stock of Europe. Centuries later, the traveling salesman—and the man who was just traveling—was doing the same thing via railroad within Europe and America. And today other traders in more modern guise are taking culture to and bringing it away from foreign lands via airplane.

Today all the civilized peoples of the world share many material goods, as they did not do a century or two ago. Tobacco, whisky, firearms, Western clothing, coffee, tea, Coca Cola, and a great variety of other things have become well-nigh universal; and the trade by which these things are exchanged has done much to lessen the cultural differences of the various peoples of the world. The steamship, the railroad, the automobile, and the airplane are thus to be regarded along with the printing press, the telegraph, the radio, and the motion picture as devices that tend to lessen cultural isolation and to make for cultural uniformity.

TRANSPORTATION AND SOCIAL ORGANIZATION

Upon its appearance each new mode of transportation—indeed, each modification of an established mode—has encountered resistance from established ideologies and forms of organization. People have generally been either scornful of or frightened by each new device, sometimes with good reason, since innovations have often been far from reliable. Reluctance to accept new transportation devices has usually led to considerable delay in perfecting and applying them. Initially, for example, promoters had great difficulty in securing financial backing for the construction of railroad lines, and every conceivable legal barrier was erected to prevent them from obtaining the necessary rights of way. General resistance was in every instance reinforced by resistance from one or a number of self-interest groups; the proprietors of wagon freight and barge freight lines, for example, connived with the politicians to check railroad construction. The forces of resistance were, moreover, aided and abetted by moralists who echoed, in pulpit and out, the sailors' claim that the steamship was a

violation of God's will (else why should He have made the winds to blow?) and the horse-and-buggy contention that the automobile was an insult to God's second noblest creature, the horse. Even scientific opinion was at times weighed on the side of God and against the technician; man, it was claimed, could not long survive the high speeds of the railroad or the automobile, or, having survived these, he most certainly could not survive those of the airplane.

Concern about the introduction of new techniques of transportation is not so unreasonable as subsequent events might make it appear, however unreasoned the form of resistance may be. For each new transport device has in the end profoundly disturbed the *status quo*, not only by displacing one or a number of antecedent devices, but by outmoding to some degree or other the spatial distribution of populations, their economic relationships and activities, and even some of their institutional forms.

Transportation and the Decline of Primary Associations.—Where transportation facilities are primitive, the economic, religious, political, and recreational organization must necessarily be primary in character. Tribalism, familism, and feudalism are modes of organization that have been characteristic of peoples who were physically isolated, either because of their primitive means of transportation or because the organization itself precluded their using more advanced techniques. All the larger and more diversified forms of group life—Egyptian, Greek, Roman, Chinese, etc.—have, as was indicated earlier, involved the use of comparatively complex and effective means of transportation.

Over the past few hundred years Western peoples have experienced a continuing shift from small-scale, primary forms of group life toward larger-scale, secondary modes of association. The role of new techniques of communication in this process was discussed in the preceding chapter, and in a fragmentary way the consequences of the development and application of new techniques of transportation have been indicated in the preceding pages. How these new means of transportation have operated to break down primary forms of association and encourage the development of secondary forms can be clearly illustrated in the effects they have had on the trade center of a generation or two ago.¹

Transportation and the Trade Center.—From the middle of the nineteenth century well on into this century, when the automobile and

¹ See D. R. Jenkins, *Growth and Decline of Agricultural Villages* (Teachers College, Columbia University, New York, 1940).

The changes that have been occurring in rural life in general constitute a special field of sociological study. For material on these changes and the factors, including developments in transportation technology, that have brought them about, see D. Sanderson, *Rural Sociology and Rural Social Organization* (Wiley, New York, 1942); and Supplementary Bibliography 8.

truck became important factors in transportation, most internal movement of goods and persons was by railroad. Here in America every city and town of consequence was ultimately linked with all others by rail; and by the close of the century a fair, if tenuous, equilibrium had been achieved between the railroad and many aspects of American social organization.

One of the socioeconomic patterns that had evolved around the railroad was the rural trade center, a town or village on a railroad that served all the inhabitants within wagon range, *i.e.*, within about a fifteen-mile radius. From this center radiated the dirt roads leading to farm habitations. These roads seldom led from town to town, since anyone who wished to go to or to ship to the next town did so by railroad. The trade center was a shipping point for local products and a distribution point for products from the nearest city. Since the residents of the area came to the trade center for economic reasons, they tended also to make it their community center. Here, normally, were the churches, the farmers' organizations, the local political headquarters, the educational facilities, and the places for various kinds of sociable activities. By both formal and informal means the trade center exercised considerable control over the farmers of the area; and here was developed in face-to-face associations (at church, livery stable, blacksmith shop, general store, and barber shop) the local opinion about national as well as local matters. When the present-day politician laments the dying out of political "grass roots," it is the disappearance of the trade center to which he refers.¹

From the commercial point of view, the trade centers of a given region were agents for the nearest large city. From the city through the trade center to villager and farmer went industrial goods and along with them some city newspapers and the news and stories brought by the drummers. From farmer and villager via the trade center to the city went the produce of the farm and the consensus of rural opinion on political and other matters. The railroad had done much to lessen the isolation of the rural dweller, and through it he had developed a variety of functional interrelations with the large towns and cities and thus with society at large. But for him and all like him the place where he traded—the trade center—was still the place where he made his contacts with the larger world. His personal world of experience was still mainly primary in character. During the latter part of the last century, however, two developments in the field of transportation began to destroy the

¹ For an expression of the view that the end of the village and small town means the end of political democracy, see A. E. Morgan, *The Small Community: Foundations of Democratic Life* (Harper, New York, 1942).

economic functions of the trade center and to attach the rural dweller more directly, if less personally, to the city.

Mail-order Retailing.—The first of these developments in point of time was organizational—the establishment of mail-order merchandising, which put the existing modes of transportation to a new use. The sale of merchandise by mail had begun in a small way as early as 1872; for with the establishment of rural free delivery of mail (undertaken in the United States as elsewhere as a matter of public policy in order to give the rural dweller much the same access to written communications as the city and town dweller) mail-order advertising and the distribution of catalogues to farm families became possible. Shipment of goods, however, had to be made by ordinary freight, an inconvenience to the buyer, particularly the farmer, which somewhat retarded the growth of mail-order merchandising. After 1913, when the American postal system was extended to include the delivery of goods as well as mail, the farmer could receive as well as order his goods without going to town; and the mail-order business rapidly expanded.

The mail-order houses soon took a considerable proportion of business from the merchants of the trade centers, who could not possibly stock the wide variety of merchandise offered by mail or compete with the mail-order houses on a price basis. Gradually, therefore, consumer purchasing of hardware, furniture, clothing, drugs, and other nonperishable goods shifted from the local merchants to the big-city mail-order houses. The farmer and the villager might continue to buy the little things that they needed in a hurry from their local store, but they bought the larger and to the seller more profitable items increasingly by mail.¹

As the trade center lost much of its trade, it began to lose other and less tangible functions. Local merchants decreased in number and importance and, along with them, local banks and other service agencies. Local merchants, bankers, and other businessmen had played an important role as leaders of the community. The local banker, for example, had usually been an informal marketing adviser to the farmer who had neither the time nor the education to enable him to keep informed on marketing conditions. As local small-town business became less profitable, the more energetic and competent businessmen or their sons moved to the larger towns and cities, where opportunities were greater. The trade center lost, in effect, its leadership as it lost the trade by which its leaders had lived. The local merchant and the local banker had maintained personal relations with and interest in their customers. The vast mail-order house was impersonal: it sold goods; but beyond doing this, it had no interest in the customer.

¹ For further details, see R. Borsodi, *The Distribution Age* (Macmillan, New York, 1927).

The Automobile and the Trade City.—Meanwhile the automobile and the better roads that it fathered were releasing the villager and farmer from dependence upon the railroad and thus taking still other functions away from the trade center. By automobile or truck the farmer could now get to the nearest large town or city as quickly and easily as he had been able to reach the trade center by horse and wagon. It became physically possible and economically advantageous for him to sell his produce directly to the city brokers rather than through the local trade-center agents. Rail shipment from trade center to city therefore declined; and since the farmer sold much of his produce in the city, he tended also to bank his money, buy his goods, and procure his entertainment there. Thus for many rural people the old trade centers ceased to be the focuses of economic and social activity; and as the more aggressive of the merchants, bankers, doctors, and lawyers of the trade center left for the city, the community aspects of the trade center often withered away.

Highway and Highway Towns.—In the heyday of the trade center, rural roads had been local roads. As has been indicated, they radiated from the trade center and only incidentally, if at all, connected one trade center with another. Travel by road from village to city or from city to city was tortuous and rarely undertaken. With the rise of motor transport, the road system was gradually brought into conformity with the demand for through routes. Highways linking city to city were built, and country roads became feeders for the highways rather than ways to reach the declining trade centers. Those of the trade centers that happened to lie on heavily traveled through routes have survived, but they have entirely new functions. They have become highway towns, serving not so much the near-by rural population as the through traveler, whom they provide with motor services, refreshments, etc., and taking on, because of their cosmopolitan trade, many of the cultural aspects of the city. The highway town is not, at any event, a significant center of local life. New transport devices and trade practices have shifted the center of rural life to the large town or the great city, where impersonal agencies have taken over, completely or in part, the former function of the highly personal, intimate, and integrated trade center.

*Suburbanization.*¹—As has been indicated, the steamship, the railroad, the streetcar, the automobile, and the new food-preservation techniques have contributed greatly to the growth of cities and to an improvement in the urban way of life, particularly in regard to diet. The streetcar and the automobile have at the same time been important factors in the

¹ See H. P. Douglass, "Suburbs" (*Encycl. Soc. Sci.*, vol. 14, pp. 433-435); and C. D. Harris, "Suburbs" (*Amer. J. Sociol.*, vol. 49, pp. 1-13, 1943).

marked change that has taken place in the character of urban social organization.

Although the city of a century ago was an impersonal aggregation, united in a variety of tenuous secondary associations, its population was fragmented into numerous groups organized on an enduring face-to-face level. Transportation within the city was so slow and costly, that the urbanite tended to stay close to his place of residence or work and to draw from these places his friends and acquaintances. For the poor, the corner saloon was the community center, and the political ward their wider world. The well to do had their neighborhood circles, their church centers, their clubs, and other fairly intimate organizations. Within the great city the individual found comparatively small, compact groups to which he might belong and from which he could secure something of the community participation that the trade center gave to the rural resident.

The development of the streetcar, the subway, the overhead systems of transportation, and the automobile expanded the world of the urbanite and reduced the importance to him of the people among whom he lived or worked. Via the new means of transportation he was now able to move more freely among the entire city population, becoming to that extent more a member of an impersonal aggregate and less a member of the Fourth Ward, the South Side, the Morningside Episcopal Church, or the gang that gathered at Murphy's Saloon.¹ Moreover, it became feasible for him to live outside the city proper. As he and many like him took up residence on the outskirts of the city, a new pattern, suburbanization, developed. With suburbanization, a separation occurred between work and home life. For the suburban dweller, home is an urbanized village, and the city itself is of interest only as the place where he makes his livelihood.

The Garden City.—Suburbanization, brought into being by the new modes of transportation, is thought by some to be the ultimate corrective for the secularizing influence of those modes of transportation. When suburbanization is accompanied by decentralization of industrial establishments, the result is a so-called "garden city," a small town built around one unit of a decentralized industrial plant and surrounded by the garden plots of workers. In the minds of some of the utopian architects of things to come, the garden city is the cure-all for modern society; it offers, they believe, a compromise between premodern rural

¹ The study of the modern city, with special reference to the changes that are occurring in the forms of organization, is one of the major fields of sociology. For a general introduction to this field, see S. A. Queen and L. F. Thomas, *The City* (McGraw-Hill, New York, 1939). For other references see Supplementary Bibliography 9.

they may be caught; if he is to live by cultivating the soil, he must know how to plant and protect and harvest his crops; if he is to procreate and perpetuate his kind, he must know how to bear children and to feed and protect and train them during their infancy. Such knowledge is come by the hard way, by experience; and it is embodied in the culture in the same way as are the beliefs and myths and other symbolic inventions that explain what is known and describe what has not yet been discovered. Until very recently, man's knowledge was never more than just sufficient to enable him to survive, and in many instances the social stock of knowledge was so inadequate that he was unable to adapt realistically to changes that affected his welfare.

In premodern societies all knowledge was, as has been indicated, empirical. By random and certainly very costly trial and error men discovered facts about their world. Each little discovery expanded their knowledge and to some extent lessened their dependence upon belief. Yet after thousands of years of empirical discovery the various peoples of the world had accumulated a very small sum of knowledge. As late as the fifteenth century only a few Europeans of all the peoples of the world believed, as had still fewer Romans before them, that the world was round. Not until Magellan finally circumnavigated the globe was this belief, held by so few, actually verified as fact and the beliefs of all the other people of the world thereby proved false.

Science as the Systematic Testing of Belief.—All societies have no doubt had their occasional doubters, men who wanted to be shown because they had not properly learned to accept the existing body of beliefs. Not until very recently, however, has a doubter been permitted to test the validity of the beliefs that he questions. The social sanctioning of doubt and the professionalization of doubters are uniquely modern phenomena.

Many attempts have been made to define science in terms of a particular logic that scientists are supposed to use, in terms of particular symbolic tools, such as mathematics and chemical formulas, or in terms of some particular research procedure, such as the controlled experiment. The really distinguishing characteristics of science, however, are skepticism regarding socially sanctioned beliefs and a high regard for verified realities. From these characteristics stem the various methods that have been invented for that systematic testing of beliefs and hypotheses (symbolic inventions of the scientist himself) that constitutes science.

The Ideology of Science.—The subjecting of beliefs to systematic testing rests upon a socially developed and maintained ideology.¹ Basic to

¹ For further discussion of this ideology, see F. E. Hartung, "The Social Function of Positivism (*Phil. Sci.*, vol. 12, pp. 120-133, 1945). See also G. A. Lundberg, *Foundations of Sociology* (Macmillan, New York, 1939); and F. Znaniecki, *The*

that ideology is the belief that such testing yields knowledge that is of ultimate practical value to men. This belief is supported by a great variety of historical demonstrations, some of which have been referred to in preceding chapters, which serve a purpose no different from the myths that support ordinary folk beliefs. The essential difference is that the belief that science is of ultimate practical value is verifiable by scientific procedures and is, therefore, acceptable to those who accept the ideology of science.

Incorporated in the ideology of science is a set of values that make living the object of life (as distinct, for example, from the values of early Christian ideology, which made death and the kingdom of heaven the object of life in this world). Many rituals have grown up around the ideology of science, and these have changed considerably with the growth of experience. At one time, for example, the mere compilation of data was considered to be *the* scientific procedure; at another time the integration of everything known and unknown into one vast "logical" system became the prescribed practice. Today a minor ritual, particularly noticeable in the social sciences, is the practice of "verification" by citation of sources. The citing of sources is or may be of aid to a reader who wants to delve more deeply into a special subject or who is sufficiently doubtful of an author's statements to want to trace down the sources of his data. Often, however, the citing of sources is no more than the observance of a ritual that does nothing whatever to validate the author's statements.

Pure Science.—The development of the scientific ideology came about as the consequence of a unique set of social factors. Some of the Greek philosophers, notably Aristotle, attempted to test some of the beliefs that were current in their day; and they ventured some testable beliefs (hypotheses), which they did not, however, bother to test. The Romans also contributed a few testable beliefs, such as Pliny's concept of the global shape of the world and his estimation of its probable size; but they did little to increase knowledge except as they conquered western Europe and inadvertently learned something about geography.¹

During the Middle Ages there began to appear here and there in Europe men who took Aristotle, Pliny, and others of the ancient seekers of the truth as their example. In this search for the truth, first mainly in astronomy and much later in physics and biology, these men were equipped not only with the knowledge and hypotheses of the Greeks

Social Role of the Man of Knowledge (Columbia University Press, New York, 1940).

¹The attempts of the ancients to develop a scientific ideology are described by B. Farrington, *Science and Politics in the Ancient World* (Oxford University Press, New York, 1940).

and Romans but also with the knowledge of the Arabs and most particularly with the mathematics that had been developed among the Arabs. Their progress was nonetheless exceedingly slow; and by the end of the seventeenth century very little scientific knowledge had accumulated. By that time, however, the idea of testing established beliefs and extending knowledge by systematic discovery had become well embedded in Western culture.¹

It is doubtful that the early scientists set out upon their explorations solely in the search for knowledge. They and the scientific ideology that they initiated seem, rather, to have been a part of the general rebellion against the medieval Church. At any event, the Church was at the time being subjected to attack from a number of directions, economic, political, and ideological; and it is reasonable to suppose that at the outset the scientific ideology was simply one of the attacks upon the strict authoritarianism of the Church. It is significant that the patrons of the early scientists were almost always secular leaders; and it was to the interest of these leaders to discredit the Church.

Although the motives of the early scientists may well have been impure, there has long since evolved the belief, verified by scientific procedures, that scientific effort must be pure if it is to be fruitful. This item in the scientific creed has often been misinterpreted by those opposed to science to mean that science is purposeless. What is actually meant is that scientific endeavor must be free (pure in this sense) from all social compulsion to validate this or that particular social belief. If the scientist is not free from social compulsions, he is nothing but a rationalizer of beliefs and ideologies, a modern version of the priest of other times. What can happen when science is subordinated to social beliefs and values is indicated by what happened to science and scientists under the Nazi regime; even the Aryan myth was then "proved" to be not a myth but a demonstrable fact.

Pure science is not in any sense purposeless. There is no parallel in the scientific ideology to the belief in art for art's sake. Pure science has as its immediate objective the extension of human knowledge and as its ultimate goal the increasing of human satisfactions. Out of long experience has come the conviction that the latter end is best served if the scientist concentrates directly on the extension of knowledge; for no one can foretell which of today's discoveries will ultimately have the greatest utilitarian value.

Science and Technology.—Scientific endeavor is both functionally and historically distinct from technological endeavor. Scientific endeavor is a modern mode of discovery, a way of enlarging the body of knowledge,

¹ See W. Dampier, *A History of Science* (3d ed., Macmillan, New York, 1942).

whereas technological endeavor is an age-old, but now highly specialized, process of invention, a means of putting existing knowledge to practical use. Historically, science developed much more slowly than technology; and most of the technological innovations that were devised during the Middle Ages and on into the nineteenth century were based upon empirical knowledge, either indigenous or, as with gunpowder, borrowed. In the invention of the spinning jenny, the powered loom, and even the steam engine, for example, there was little use made of scientific findings. These and the other inventions that contributed to the industrial revolution were mainly the work of ingenious craftsmen and mechanics who were unschooled in the scientific knowledge of the time.

The rapid growth of scientific knowledge in recent years and the exhaustion by technicians of the existing stock of empirical knowledge have together resulted in technology's becoming dependent upon science. As mechanical devices, biological controls, etc., became increasingly complex, knowledge for their further elaboration could not possibly be obtained by the empirical method of discovery. Since the middle of the last century few inventions have occurred that did not start with, or at least depend upon, science-derived knowledge. Although science did not, as some may suppose, bring about the industrial revolution, it has saved that revolution from coming to a dead end. The early side-wheel steamboat, for example, was invented without the aid of science. But the devising of a workable shaft-driven steamship would have been impossible with the metal that was then available; and the development of suitable metal could not possibly have proceeded empirically. Science eventually provided the knowledge about metals that was necessary for the developing of steel, which is essential for the construction of shaft-driven steamships and for most of the other mechanisms of modern society as well. All recent developments in machine technology, agricultural technology, medicine, and industrial chemistry have been built upon knowledge derived from scientific endeavor.¹ It is inconceivable that man could ever have developed by empirical methods the knowledge that was necessary for the invention of such complex techniques as those of extracting aluminum from bauxite, of communicating via electrons, of synthesizing such disease-killing drugs as sulfathiazole, of refining petroleum into a hundred and one fractions, or of any of the other

¹ For a brief discussion of the many pure science discoveries that were basic to two recent technological developments, radar and the atomic bomb, see *Time*, Aug. 20, 1945. For more extensive evidence of the pure science basis of modern technology, see H. D. Smyth, *Atomic Energy* (Princeton University Press, Princeton, 1945); J. D. Ratcliff, *Yellow Magic: The Story of Penicillin* (Random House, New York, 1945); and B. Sokoloff, *The Story of Penicillin* (Ziff-Davis, New York, 1945).

intricate techniques that are commonplace and vital elements in contemporary life.

For the first four hundred years or so, scientists had to accept on faith the idea that someday and in some way their discoveries would prove to be of practical value. For the past hundred years they have had ample demonstration of the eventual utility of their efforts and have had clear proof that the quickest way to the improvement of man's estate is by the slow and laborious path of pure science.

SOCIAL RESISTANCE TO SCIENCE

There seems to have been little organized resistance to the technological innovations that were so very important in disrupting the feudal way of life. During the early Middle Ages the Church fought those innovations that seemed to jeopardize its position, and later the medieval guilds put up a losing struggle against the mechanization of productive processes. No doubt there was, as there always has been and always will be, sporadic individual and minority-group resistance to each technological development. But the weight of organized resistance was directed not against technological change but against science; and that resistance appeared long before science had any significant bearing on technology and through technology on social life in general.

Religion and the Rise of Science.—From the very outset the medieval Church was unalterably opposed to the testing of its dogmas regarding physical and biological phenomena. The Church had assumed authority in all matters, secular as well as sacred, and had made Christianity into an all-inclusive, totalitarian ideology. To cast doubt upon the validity of any of the Church's interpretations of nature, of man, of society, or of God was to attack the whole ideology, just as, many centuries later, to question any phase of the Nazi ideology or practice was treason.

Throughout the Middle Ages and well on into the modern period, the Church resorted to every means at its command to check the rise of science. That it failed in the end to prevent the growth of scientific knowledge and the dissemination of the scientific ideology was not, as some would have it, due to the fact that "truth will out." Its failure was due, rather, to the rise in some regions of Europe of secular political power and of Protestantism. The Reformation was a great boon to science, for the Protestant churches were for a time well disposed toward science, not from any deep concern for the facts of science but because in science Protestantism found an ally against the medieval Church. Under the tolerance, if not the active support, of the Protestant churches, scientists of the seventeenth century enjoyed a freedom of action that previously had been lacking; and this, plus the growing use of printed mediums, gave tremendous impetus to the growth of science.

tific knowledge. The fact that for three centuries most scientific discoveries occurred in strongly Protestant countries is in some measure a consequence of the favorable ideological climate that Protestantism provided for science.

The compatibility of science and Protestantism came to an abrupt end, however, with the publication and wide acceptance by scientists of Darwin's *The Origin of Species by Means of Natural Selection* (1858). For half a century thereafter the major ideological controversy in the Western world revolved around the Darwinian hypothesis of the biological evolution of man. Protestant churchmen considered this hypothesis an attack upon religion in general and Christianity in particular, for at the time they accepted the Biblical story of creation literally. (The antagonism of the Protestant clergy may perhaps have been sharpened by the fact that they were no longer in bitter conflict, ideologically or politically, with the Church and thus no longer needed science as an ally.) The struggle between the Protestant churchmen and the scientists was briefer but more extensive than the earlier conflict between the medieval Church and science had been. The battle against "fundamentalism," as the Protestant view came to be called, distracted many scientists, particularly biologists, from the pursuit of knowledge and diverted their energies into ideological disputation. But the net result seems to have been the glorification of science in the minds of laymen. With Protestantism already on the decline so far as its prestige with the public was concerned, the Protestant attack upon science served to publicize science and to give science the role of public defender against religious bigotry. Today, at any event, neither Catholicism nor Protestantism professes an opposition to science per se. Religious men have, on the contrary, taken to defending their dogmas on scientific grounds; at least they have been prone to use scientific terms in justifying matters of faith.

Science and Religious Belief.—If organized Christianity had not been totalitarian, no conflict would, as a matter of fact, have arisen between religion and science. For there is no inherent opposition between religious beliefs of any sort and scientific discoveries. Religion is at basis nonutilitarian, while science is exclusively concerned with utilitarian matters. The core of any religious ideology is a belief in some sort of supreme being or beings to whom the ultimate (final) cause of all phenomena is ascribed. Since science describes observable phenomena and their relationships and does not pretend to explain the purpose of their existence in the cosmos, religion and science deal with two dissimilar realms. It was only because religious ideology had been united with folk descriptions of nature that conflict between religion and science arose in Western societies. Neither the Japanese nor the Chinese have had any ideological difficulty in taking over the new ideology of science.

Because organized Christianity was as much concerned with secular as with sacred matters, and perhaps much more so, the rise of science played some part in hastening the decline of first the medieval Church and then Protestantism. Science gave ammunition to those who were for other reasons, political, economic, or ideological, already at odds with religious authority. If, so the argument ran, the Church was wrong about the origin and antiquity of man, could it be right about the efficacy of prayer? There is no reason to suppose, however, that the conflict that occurred between organized Christianity and science means that ultimately a social choice must be made between religion and science. All societies seem to have some system of beliefs concerning the "cause" of man, the reasons for his existence, and what happens to him after death; and none of these beliefs are testable; they are matters of faith and must so remain. Science neither destroys such beliefs nor removes the social need for their existence. The knowledge that science provides is a supplement to the empirical knowledge by which all men live, not a substitute for the faith that makes life worth living.

SCIENCE AND SOCIAL ORGANIZATION

The relationship between the decline of organized Christianity and the rise of science is clear enough. Not so apparent is the relationship between science and other aspects and modes of social organization.¹ Political, educational, benevolent, aesthetic, business, and other organizations have sometimes retarded and sometimes accelerated scientific discovery and the application of scientific discoveries to the achievement of utilitarian ends. The effects of the growth of scientific knowledge on established modes of organization seem so far, however, to have been limited and indirect. As was indicated earlier, the disruption of the functional effectiveness of old modes of social organization and the development of new ones have in the main been brought about by changes in technology. Scientific knowledge has entered into this disruptive process only within the past century and then only indirectly, insofar as it has aided in the making of technological inventions. It was not science but technology, for example, that brought modern cities into being and in so doing disturbed all the old forms of social life, including such basic institutions as the family.

Nor has science, as many believe, undermined the older forms of social organization by destroying faith in the ideologies of these forms. Functionally effective and hence rugged social structures are not disturbed by scientific disproof of their supporting ideologies; social dis-

¹ For general discussions of this problem, see J. D. Bernal, *The Social Function of Science* (Macmillan, New York, 1939); and J. E. Thornton, *Science and Social Change* (Brookings, Washington, D. C., 1939).

crimination against Negroes in America, for example, has in no way diminished during the past century, although in that time science has thoroughly disproved the belief that whites are biologically superior to Negroes. Likewise, scientific disproof of the belief in an Aryan race biologically distinct from and superior to other peoples did not prevent the effective use of this old ideology by the Nazi party in prewar Germany. It would seem that in general scientific findings are used—and abused—by political and other leaders when those findings suit their purposes and are accepted by the mass of the people only when the findings confirm social changes that are already in process.

The Social Sciences.—The social sciences have the greatest potentiality for affecting social organization in a direct rather than indirect way. As was pointed out in an earlier chapter, the study of man and his society has as its ultimate object the provision of knowledge that will serve the social technicians as the natural sciences do the machine, chemical, and biological technicians. Perhaps, as some social scientists expect, this century will see the social sciences come into their own, even as biology came into its own during the last century.¹ Until well into this century social scientists were engaged mainly in clearing away the ideological rubbish that obscured objective study and thought about society. Moreover, many of the earlier social scientists and not a few of the more recent ones were but philosophers in scientists' garb, and the concepts that they erected have had to be laboriously demolished. Within the past thirty years or so, however, a good deal of pure science research has been undertaken; and from it have come relatively large additions to our positive knowledge of society. Already the social technicians—criminologists, penologists, social workers, etc.—are finding practical applications for this knowledge. Modern methods of treating criminals, for example, are based upon sociological and sociopsychological discoveries concerning the factors that determine criminal behavior.

The social sciences have not yet, however, had much direct influence upon political, economic, family, community, or other forms of group association. A few governmental administrators, both in Europe and America, are technicians who have been trained in the social sciences.² And during the recent war many social scientists were put to work as social technicians; economists were called upon to advise in the control of the wartime economy, political scientists to aid in such varied matters

¹ For recent expressions of this hope, see R. Linton, ed., *The Science of Man in the World Crisis* (Columbia University Press, New York, 1945); and G. A. Lundberg, "The Social Sciences in the Post-war Era" (*Sociometry*, vol. 8, pp. 137-149, 1945), and "Can Science Save Us?" (*Harper's Mag.*, vol. 191, pp. 525-531, 1945).

² For a recent attempt to provide political administrators with techniques derived from scientific study of group behavior, see A. H. Leighton, *The Governing of Men* (Princeton University Press, Princeton, 1945).

as domestic administration and international relations, psychologists and sociologists to assist in the measurement and manipulation of public opinion, etc. By and large, however, political leadership is still a folk process; and political leaders still depend mainly upon devices that were current in the time of the hand hoe, the spinning wheel, and the sailing ship. The development and exploitation of a science-based social technology comparable to the science-based physical and biological technologies is, therefore, something for the future. It will depend first upon the maintenance of a virile and pure science of society and secondly upon the willingness of men in the mass to do things the hard way. So far, men have preferred to try to resolve the complex problems of social disequilibrium by superficial and hence ineffective measures.

Science and Education.—Toward the end of the last century there crept into the scientific ideology the belief that the mass of men could be made to behave more rationally if they were taught the facts of life as discovered by the sciences. On this assumption some science was added to public-school curriculums, particularly in Germany, England, and America; and successive generations of children have been drilled in a misassortment of elementary facts about nature.¹ But, as experience has demonstrated, men are creatures of culture rather than knowledge per se, creatures of habit rather than reason; and what the individual learns to do at home and in the streets has much more influence on his behavior than have the facts that he has been told in the schoolroom. Today, even as fifty years ago, men must be protected from contaminated water, prevented from using harmful drugs, and coerced or enticed into planting better seed and using modern methods of soil conservation. The attempt to indoctrinate the masses in scientific knowledge has not, therefore, lessened the reliance of the masses upon science-trained technicians. It has, however, to a limited degree trained certain classes of the population (the so-called "better educated") to prefer the advice and counsel of trained technicians to that of folksy magic men—to consult the state department of agriculture about some problem of soil or seed rather than the sage at the crossroads store, to rely on the services of a physician rather than so-and-so's snake oil, etc. Other than this, the application of scientific knowledge to the solution of the practical problems of life has been made by technicians in the steel mill, in the biological supply house, in the food-processing company, and in such public agencies as those that endeavor to assure a supply of pure water to city populations, to keep down mosquitoes, rats, and other disease-carrying pests, to maintain standards of building construction and use, etc.

¹ See J. L. Bennett, *The Diffusion of Science* (The Johns Hopkins Press, Baltimore, 1942).

The Scientistic Ideology.—The attempt to teach laymen science for use has led to their having a wide and superficial acquaintance with some of the symbols of science and an exaggerated respect for the magic that science can work. The old saying "A little learning is a dangerous thing" has thus been partially verified, for the layman has become incredibly gullible about anything smacking of science. The medical quack with a fluoroscope and white gown impresses the man who is too well schooled to believe in old folk remedies; the face cream containing enzymes, hormones, and vitamins attracts the woman who is too much sophisticated to rely on older forms of wrinkle-removing magic; the scientistic mythology in the Sunday supplement intrigues the man too knowing to be taken in by fortunetellers and the prophecies of the almanac; and the man from outer space beguiles the youngster too wise to be fooled by stories about gnomes and pixies. Popular education in science has not gained acceptance for the facts of science or even for the scientific ideology; it has, rather, led to the development of a new folk faith in a new form of magic. This faith, and its associated myths, values, and rituals may be designated as the scientistic ideology.

The scientistic ideology reduces the complexities of the scientific process, of scientific findings, and of the consequences to society of the development of science to forms that fit into the folk frame of reference.¹ It makes magic out of what is actually a laborious human endeavor; it makes high priests out of hard-working and unpretentious scientists; and it raises social expectations far beyond any reasonable possibility of fulfillment. In so doing the scientistic ideology endangers science, jeopardizes the status of the scientist, and provides antiscientists with ideological brickbats.

THE SOCIAL MILIEU AND SCIENTIFIC ENDEAVOR

The rise of science was part of the entire process of secularization of Western societies, which to some extent freed men's minds from the domination of traditional ideologies even as it to some extent freed men themselves from the domination of autocratic religious, political, and economic leaders. Scientific endeavor can continue only as long as the kinds of conditions that originally gave rise to it are maintained; and any marked deterioration in those conditions, such as that which oc-

¹ The development of the scientistic ideology has been encouraged by many men who should know better. On the one hand there are the dramatizers of science, such as P. De Kruif (*The Male Hormone*, Harcourt, New York, 1945), who present a few of the sober facts of science in a breathless and world-shaking manner. On the other hand there are the philosophers of science, such as the various Huxleys, who propagate the belief that science is a social cure-all. See, for example, A. Huxley, *The Perennial Philosophy* (Harper, New York, 1945).

curred temporarily in Germany under the Nazi regime, will certainly lessen and possibly extinguish the scientific spirit. The perpetuation of a social milieu favorable to science is, therefore, of great concern to all who adhere to the scientific ideology.

Only one who is both highly motivated and relatively free from normal social values and restraints will engage for months or years in a laborious scientific endeavor that in the end may or may not lead to some new discovery, which, in turn, may or may not secure the acclaim of his scientific colleagues, and which is most unlikely to bring him wealth, public recognition, or any of the other rewards that most men deem desirable.¹ Scientists work for the most part in obscurity and well aware that what they do is of no direct and immediate interest to their fellow men. They are of necessity individualists par excellence; if they were not, they would be stockbrokers, physicians, politicians, or members of some other conventional and personally rewarding occupational group. Scientists are also idealists, as idealistic in their way as are the great religious leaders.

But like all men, scientists must eat. Since their work seldom has any commercial value (they may even have to pay for the publication of their discoveries in technical journals), they must be subsidized and subsidized in such a way that the source of their income in no way restricts their freedom to pursue their scientific interests. For it is mainly freedom to pursue those interests that compensates scientists for their arduous labors and for their lack of conventional rewards. The true scientist is thus somewhat comparable to the true artist. Motivation must be internal; if the scientist is not self-driven, he can be no more than a scientific hack.

Many of the early scientists were either men of wealth who took up science as an avocation, even as some men take up painting, or else protégés of aristocrats who found the antics of the scientists diverting and, perhaps, in those antics a roundabout way of attacking the priests with whom they were politically at odds. At any event, until the rise of the modern universities (secular substitutes for the scholastic institutions of the Middle Ages) the position of scientists, and so of science, was precarious. Initially the modern universities, like their medieval predecessors, were concerned mainly with philosophical matters, which meant religious and other ideological polemics; and science was a sort of poor relation. In time, however, many of the universities became centers of scientific research, providing scientists with research facilities and a means of livelihood. Some universities, such as Oxford, remained studiously aloof from any such modern innovations as science; most, however, gave sup-

¹ For biographical data bearing out this statement, see B. Jaffé, *Men of Science in America* (Simon and Schuster, New York, 1944).

port to science; and this support has been a major factor in the rapid growth of scientific knowledge during the past 100 years.¹

Industrial Research.—As industrial processes have become more and more complex and as rule-of-thumb methods have been displaced by rigorously controlled procedures, the commercial demand for science-trained technicians has increased; and many industrial organizations have undertaken research projects of their own. The demand for science-trained technicians has had mixed effects upon science itself. On the one hand, it has made scientists increasingly valuable to universities as teachers and has thus enhanced their prestige and increased their income. On the other hand, it has tended to divert a high proportion of scientists from research to teaching, from adding to the store of knowledge to transmitting what is already on file. The development of industrial research laboratories has also had varied consequences. In some instances the industrial researcher has been given all the equipment he could possibly want and has been left free to follow his own interests. In most cases, however, the industrial researcher has been restricted, if only by his knowing what his corporate patron wanted him to discover. No one can doubt that industrial research has been a tremendously important factor in the application of scientific knowledge to the solution of technical problems. But the stress has understandably been on immediate, short-run problems, usually those of the corporation of which the laboratory is a part; and most of the contributions to the body of pure science knowledge that have been made by industrial laboratories have been inadvertent, or at least incidental.

Governmental Research.—Much the same thing may be said about governmental subsidy of science, a subject—or threat, as some would have it—that has loomed large in the minds of scientists, particularly since the wartime demonstration that the military strength of a nation depends in considerable measure upon its technology and hence indirectly upon its science.² Public interest has of recent years led to the establishment

¹ See E. Bradby, *The University Outside Europe: Essays on the Development of University Institutions in Fourteen Countries* (Oxford University Press, New York, 1939); B. J. Stern, *Social Factors in Medical Progress* (Columbia University Press, New York, 1927); and especially E. Zilsel, "The Sociological Roots of Science" (*Amer. J. Sociol.*, vol. 47, pp. 544-562, 1942).

² The belated recognition that the science of a modern nation is an important item in its wealth and military power has lately given rise in America to a variety of proposals for governmental subsidy of pure science research. For a report on one such proposal see *Time*, July 30, 1945.

For a vigorous objection to any sort of governmental control of science, see J. R. Baker, *The Scientific Life* (Macmillan, New York, 1943). "Only two things can kill scientific progress," Baker contends. "These two are 'planning' and the confusion of science with technology" (p. 137). See also Baker's *Science and the Planned State* (Macmillan, New York, 1945); and V. D. Kazakévich, "Social Sciences in the Soviet Union" (*Amer. Sociol. Rev.*, vol. 9, pp. 312-318, 1944).

of research in such fields as forestry, agronomy, and entomology; and in many instances the researchers have been given lavish financial support. The social benefits have no doubt been many times greater than the social costs. But with public research, as with industrial research, the problems are necessarily immediate rather than long run and are therefore technological rather than scientific. If the public is sufficiently frightened, it will support an institute for the study of Rocky Mountain fever, of juvenile delinquency, or of methods of releasing superatomic energy. It will not knowingly support a scientist in the lifelong and quite possibly futile endeavor to ascertain the chemical composition of blood, to devise a mathematical formula for handling the behavior of electrons, or to study the psychological factors involved in race riots. The possibility of a social profit from such pure science endeavors is too remote and too uncertain to be attractive to legislators and taxpayers. Yet it was knowledge of the chemical composition of blood that made possible the development of the blood-plasma and other techniques which played such a large role in military medicine during the war. And it was the contribution of an impractical mathematician that was one of the key concepts used in developing the atomic bomb. Likewise, much pure science research in social phenomena will have to be undertaken before the hazard of race riots or any other social disorder can be reduced.

The Contemporary University.—The maintenance of a body of scientists sufficiently large and sufficiently free to assure the continual growth of scientific knowledge would seem to depend upon the universities. Technological application of scientific knowledge is being adequately provided for by industrial and governmental agencies; neither, however, will do very much to add to the store of scientific knowledge. Only through the universities can scientists be given the support and the encouragement to pursue the scientific will-o'-the-wisps that may someday yield new knowledge about nature or society which may someday prove useful to the technicians. And recently a number of factors have appeared that threaten the continuation of university support of science.

Among these factors the most obvious and perhaps the most temporary has been political domination of universities under totalitarian governments.¹ Political dictatorship has invariably led to subjugation of the universities and with it the prostitution of the sciences for political ends. Under dictatorship the physical scientists have usually been set practical, *i.e.*, technological, problems; and the social scientists have either become political technicians, political ideologists, or political prisoners. The future of science is therefore inseparably interwoven with the future of political organization. Any marked and continuing trend toward

¹ See E. Y. Hartshorne, *The German Universities and National Socialism* (Harvard University Press, Cambridge, 1937).

political authoritarianism—whether called socialism, communism, or fascism—will necessarily limit the freedom of the universities and in turn the productivity of science.

The Scholastic Revival.—The second and more subtle and in the long run probably more serious threat to the continuation of a favorable scientific climate in the universities is the appearance within academic circles of an antiscientific trend. This goes under a variety of euphemisms, such as “liberal arts” and “humanities,” but is in fact a revival of medieval scholasticism.¹ Here in the United States the movement stems from the attempt to turn the universities into agencies of mass education. There have long been other institutions, usually described as colleges, whose primary function is that of providing a broad, general education for the better qualified young of the nation. They are not and have not tried to be centers of scientific development. They were and are agencies for the general dissemination of knowledge.

The traditional division of labor between university and college has much to commend it. Of recent years, however, it has become considerably blurred: on the one hand, some college administrators have expected scientific research from the members of their faculties, without reducing the teaching burden or providing research facilities; on the other hand, some university administrations, enamored of the liberal arts tradition of the colleges, have depreciated scientific study and the training of technicians and have attempted to compete with the colleges in the provision of a broad, general education. How far the latter effort will go is not yet evident; but it is unquestionably unfavorable to the maintenance of a high level of scientific endeavor.²

There was a time when scientists with patience and endurance and little else could add something to human knowledge. What scientists then needed was personal subsidy. But today the physicist must have a cyclotron, the biologist an electronic microscope, and the social scientist an I. B. M. machine or some equally complex and costly equipment. As scientific discovery has progressed, science has become as costly as well as laborious activity. And it is just at this time that the tendency to dis-

¹ Chief ideologist of neoscholasticism in America is M. J. Adler, whose latest effusion is *How To Read a Book: The Art of Getting a Liberal Education* (Simon and Schuster, New York, 1940) and whose major prophet is R. M. Hutchins (*The Higher Learning in America*, Yale University Press, New Haven, 1936; and *Education for Freedom*, Louisiana State University Press, Baton Rouge, 1943). See also M. Van Doren, *Liberal Education* (Holt, New York, 1943); and N. Foerster, *The Humanities and the Common Man* (University of North Carolina Press, Chapel Hill, 1945).

For a philosophical attack upon neoscholasticism, see J. Dewey, *Problems of Men* (Philosophical Library, New York, 1946).

² See G. A. Lundberg, “What To Do with the Humanities” (*Harper’s Mag.*, vol. 87, pp. 64-71, 1943).

courage science in favor of what are fatuously thought to be "higher educational values" has appeared in the universities, heretofore the primary centers of science.

The continuation of corporate grants to universities for research in the sciences and the establishment by wealthy patrons of research foundations may somewhat offset this trend. It is possible also that the social shock occasioned by the advent of the atomic bomb may revive university interest in scientific research, if it does not bring about a subjugation of science to politico-military concerns. But scientific endeavor is difficult enough under the most ideal conditions and is, because of its development, growing ever more difficult. And unless our society—and this probably means our universities—can in some way or other provide for the maintenance of a scientific personnel, free and independent from all restraints except adherence to the ideology of science, scientific knowledge will in time cease to be an important factor in technology; and technology will thereupon become static and remain that way.

RECREATION AND THE ARTS

Modern science has made possible an unprecedented extension of man's control over physical and biological nature and holds some promise of enabling him ultimately to exercise a similar control over the development of his social relationships. There are some who believe, however, that contemporary stress on utilitarian matters, such as adequate diet, freedom from disease, comfortable housing, compatible marriages, competent government, and peace between nations, is at the expense of some higher, nonutilitarian value. When this view is predicated upon an ascetic ideology, such as the early Christian belief that life was at best an unpleasant prelude to eternal happiness, it transcends scientific concern; for it is then a matter of untestable faith. Of ascetic ideologies the sociologist can say only that they aid impoverished people to endure their poverty and at the same time deter them from any endeavor to improve their material welfare. When, however, the disparagement of contemporary utilitarianism is predicated upon some aesthetic ideology, it is subject to critical scientific scrutiny. For aesthetic beliefs and values are of a mundane order and need not be accepted on faith. Thus while the assertion that "modern men live in sin and will go to hell" must be accepted or rejected on faith, the charge that "modern society produces fine plumbing (or roads, or what not) but no real art" can be put to the test.

Recreational Activities as Ends in Themselves.—Many animals, most particularly man, engage in some activities that are pointless and profitless. Blue jays may gather and bury acorns but they never dig them up again for food. Squirrels, on the other hand, gather and bury acorns as a means of providing themselves with a supply of food for the winter. For the

squirrel acorn burying is a utilitarian activity; for the blue jay it is an end in itself rather than a means to an end. Similarly, the hungry primitive who stalks wild game with bow and arrow is hunting for food, whereas the modern hunter is just hunting for the sake of hunting, because he enjoys hunting, not because he needs or wants meat.

The distinction between activities that are a means to an end and those that are ends in themselves is seldom clear-cut, at least with man. It is often difficult, for example, to distinguish between a man's going to church in order to get into heaven and his going there in order to see friends and acquaintances, to hear pleasant music, or to listen to a soothing sermon. Many social activities are, in fact, of mixed character; and many that are functionally ends in themselves are socially camouflaged as means to ends. Whatever it may be in ideology, however, any activity that is engaged in for its own sake is a recreational pursuit.

The need for recreational activities is apparently universal; and many hypotheses (such as the "surplus energy" theory) have been advanced to explain why human beings play. Whatever the psychological reasons, the important sociological fact is that recreational activities of one sort or another are found in all societies. Even those peoples for whom the struggle for survival is bitter and unrelenting do some things that can be interpreted only as ends in themselves. Prehistoric men, like modern men, ornamented their tools, their pottery, and the walls of their caves.¹ All peoples, primitive and civilized, also talk at times to no end; *i.e.*, they converse in pointless and random ways. All tell stories that can have no other possible function than to amuse. Most have their traditional games—such, for example, as mock battles in which balls, cards, or other harmless objects serve as symbols of spears or guns. And both music, the making of pleasurable but meaningless sound, and dancing, moving around without getting anywhere, are found in most primitive and all modern societies.

Work and Play.—In the more intimate and highly integrated societies work and play are usually inseparably interwoven, and the members secure most of their recreational satisfactions incidentally. The boatmen and the harvesters in the fields sing as they work, the village cobbler interrupts his labors to chat with the village baker across the street, the merchant gossips as he sells, etc. In such societies work is mostly a group activity, and the members of the work group are friends as well as fellow workers. They share common interests, knowledge, and beliefs; and they can and do talk together as they work. Such talk—gossip, joking, etc.—breaks the monotony of their work, keeps their minds occupied, and reinforces their sense of belonging.

¹ See F. Boas, *Primitive Art* (Harvard University Press, Cambridge, 1927).

Where, however, an elaborate division of labor exists, as it does in contemporary societies, the specialized worker tends to be separated from like-minded fellows during his work period and prevented by the pressure of his work from seeking them out. Although a division of labor increases the number of people who contribute to the fulfillment of any task, it depersonalizes the work group; for it gives to each member a specific and isolated task that he does by himself.

Urbanization and the decline of primary types of group life, family, village, and neighborhood, which accompanied the growth of the division of productive labor, have also aided in depersonalizing the relations of those who come together during the course of their workday. Although clerks, salesmen, policemen, streetcar conductors, and countless other urban workers deal constantly with persons, their dealings are almost entirely utilitarian; the meetings are brief and impersonal and generally lack any of the congenial sort of friendly interplay that accompanied the transactions between village merchant and his well-known customers. When the modern woman goes on a shopping tour she may, it is true, be seeking entertainment as well as merchandise; but however much recreation she may obtain from her meanderings through department stores and specialty shops, the clerks who serve her will acquire nothing over and above their wages except tired feet and headaches. Businessmen may loiter over their luncheon, office workers may occasionally slip out to the washroom for a smoke and a bit of conversation, and government employees may knock off work once or twice a day for a cup of coffee with like-minded colleagues. But the vast majority of urban workers and a constantly increasing proportion of rural ones find relatively little enjoyment during their working hours. They work as a means to an end, the pay check, and seek their recreational satisfactions elsewhere.

One consequence of the trend toward a separation of work and play has been the reduction of the working day. No longer than a century ago it was not uncommon for the worker, employer as well as employee, to be on the job for upwards of eighteen hours a day. The introduction of the standard twelve-hour day in American industry (about 1860) was at the time considered a revolutionary innovation. Fifty years later the standard workday was reduced to eight hours, on the grounds that eight hours of work was the maximum consistent with the health of the worker.¹ The continued reduction of the workday is in part a reflection of the increased productivity of labor that has obtained under industrial techniques, and because of this fact it has been taken as one measure of the rising standard of living. Actually, however, the reduction of work is in many instances more apparent than real. Work has been concentrated,

¹ For further data on this facet of recent social history, see W. Woytinsky, "Hours of Labor" (*Encycl. Soc. Sci.*, vol. 7, pp. 478-493).

and the recreational activities that formerly were interwoven with work have been squeezed out of the work period. The merchant or artisan who was on the job for eighteen hours did not ordinarily work eighteen hours; interspersed with his work was much play, gossip with customer and fellow worker. Since the modern man cannot play during his working period, he plays when his work is done; and even as work is concentrated, so too is play.

Professionalization of Recreation.—Today recreational activities are not only separated from work both in time and place but are also as much specialized as work itself. The modern man lives as well as works largely among people with highly diverse interests, values, and abilities; and he is therefore often unable to secure sufficient recreational satisfaction from participant activities, such as conversation, games, family and community festivals, and the like. Modern populations are highly differentiated, their social groupings increasingly impersonal and derived in character. The members of a family tend to scatter, both in terms of interests and activities. Neighborhood groupings are spatial (*i.e.*, ecological) rather than organizational units, impersonal rather than intimate, face-to-face groupings. As a consequence the modern individual must often seek his recreational satisfactions from specialized and professionalized agencies—the theater, the ball park, the newspaper, etc.¹

Some participant forms of recreation do, of course, still exist. The English laboring class “pub” is a commercially provided gathering place for congenial companions who, having gathered, entertain themselves with conversation and a game of darts. The European café provides a meeting place for individuals seeking transient conversational companions. The crossroads store has not entirely disappeared from American life, and in it gather the men of the village for a bit of talk. Women still gossip over the back fence; family groups crawl over the highways in their cars on Sunday; and through clubs of many sorts people come together to do whatever it is they enjoy doing. In the main, however, the modern man secures his recreation in nonparticipant ways. He does not entertain himself; he is, rather, entertained.

The provision of recreational satisfactions by professional entertainers has given rise to an aesthetic ideology. In this ideology a distinction is drawn between work and art, and the utilitarian satisfactions provided by the worker are considered to have a less socially significant value than the aesthetic satisfactions provided by the artist. The separation of work and play and the aesthetic ideology that it engenders are not, of course, peculiar to modern societies. The arts were highly developed in ancient

¹ See F. R. Chilles, *Americans Learn to Play* (Appleton-Century, New York, 1940); J. F. Steiner, *Americans at Play* (McGraw-Hill, New York, 1933); and L. H. Weir, *Europeans at Play* (A. S. Barnes, New York, 1937).

Greece and in the other societies of antiquity; although there was little separation of work and play for the worker, the social elite played while all others worked. What is peculiar to modern societies is the extensive dependence of the mass of the people upon professionally provided recreational satisfactions, *i.e.*, upon the arts.

The Fine Arts.—In all the older civilizations the masses secured their recreational satisfactions almost entirely from participant activities, either daily along with their work or, more rarely, separately through festivals and other folk forms of play. Professionally provided recreation was a prerogative of the upper classes. It was nobles and men of wealth who patronized the arts; and the various arts of Greece, Rome, China, India, etc., were developed and maintained under the auspices of the socially elite. Because they were produced for and appreciated by a small and select segment of the total population, the arts tended to take esoteric and highly sophisticated forms. The criteria of artistic achievement were rigidly defined; art forms were traditionalized; and the number of successful artists and hence of artistic products was consequently limited. The arts were, in sum, by the few and for the few.

The arts as well as the techniques of Roman civilization fell into disuse in western Europe during the feudal period. Legend has it that the feudal lords maintained buffoons (the court jesters of a later period) and that ballad singers roamed from manor to manor singing for their suppers. But no trace of the arts of the classical civilizations is found under feudalism. The Crusades brought about some introduction of Eastern art forms; and when, beginning about 1200, Europeans rediscovered the writings of the ancients, they also rediscovered some of the Roman and Greek art objects. For reasons of its own, the medieval Church in time became the patron of a revival of Greek and Roman art; and for some centuries those of the arts that could be put to religious use flourished.¹ This Church-fostered renaissance of the esoteric arts of Rome and Greece established the forms which, elaborated and divested of their religious symbolism and in some instances augmented by introductions from folk sources, are basic to the fine arts of the contemporary Western world.

The Vulgar Arts.—The fine arts are still by and for the few; in fact, that is what makes them "fine." But with the growing separation of work and play and the increasing reliance of the masses upon professional provision of recreational satisfactions, a great number of new art forms have arisen. These new forms are characterized by comparative simplicity and easily comprehended symbolism; they are by and for the many. They serve the same function, entertainment, as do the fine arts; but since they are for the many rather than the few, they may be termed "vulgar."

¹ For further details, see B. Groethuysen, "Renaissance" (*Encycl. Soc. Sci.*, vol. 13, pp. 278-285).

The development of the vulgar arts has come as the fulfillment of a social need and has been facilitated by certain technological inventions, of which the first perhaps was the printing press and the latest is television. Early use of the printing press was nonrecreational; but like all subsequent developments in communication technology, the printing press soon was devoted to the provision of entertainment, first in the reproducing of long written stories, novels, and later in the printing of newspaper gossip and other trivia. The medieval revival of the Greek and Roman fine arts forms did not include the drama, perhaps because the Church felt that the enactment of secular stories would detract from its own enactments of religious ritual. The drama was, however, revived as a vulgar art; and in spite of religious and other discouragements, playwriting and the enactment of plays for the common man became fairly general. With the development of motion picture and radio technology, the spoken and enacted story could be reproduced on something of the mass scale that written stories were; and these techniques and that of phonograph recording made possible mass production and dissemination of song and other kinds of music. It is largely through these communication mediums and out of the various art forms that have evolved to fit their special limitations and potentialities that the majority of the members of modern societies secure their recreational satisfactions.

ART AND IDEOLOGY

Primitive peoples have frequently imputed magic properties to the designs that they scratched or painted on their tools or bowls or other equipments; and premodern peoples have in many instances justified their folk festivals in supernaturalistic or utilitarian terms. Thus the autumn festival of agricultural peoples was often justified as the giving of thanks to the gods for a bountiful harvest, and some spring festivals were supposed to assure the fertility of the soil. Modern peoples also impute magic or power of some sort to most art, fine or vulgar; for men generally seem called upon to find some utilitarian significance in their recreational activities whenever those activities are discrete in time and form from activities that are *de facto* utilitarian.¹ At any event, most current recreations are embroidered with ideological justification so that they are made to seem to have long-run value as well as to provide momentary enjoyment. Football is said by its enthusiasts to be a builder of character, of team work, and of health; and the paintings on the rich man's walls are said by those who enjoy them to be of enduring cultural worth.

¹ Thus Christmas, which has become a secular festival in the Western world, is still given sacred implications. See J. H. Barnett, "Christmas in American Culture" (*Psychiatry*, vol. 9, pp. 51-65, 1946).

From the outset the growth of the vulgar arts in western Europe was vigorously resisted by religious and political leaders and strongly depreciated by the social elite as degrading and debased. Both religious and secular authorities endeavored to prohibit the publication and sale of novels and the presentation of plays.¹ In many instances censorship, justified either on moral or political grounds, was so stringent that novels were published and circulated surreptitiously and theatrical troupes spent as much time in jail as on the stage. Whether the reluctance to see commoners enjoy themselves stemmed from a desire on the part of the elite to retain a monopoly over all the arts or a sincere conviction that the vulgar arts were an evil influence is impossible to say. The restrictions were, at any event, justified in terms of moral or social welfare. Religious bigotry was involved, but it was not the sole factor; in China, where there was little in the way of organized religion, the rise of the novel was resisted almost as strongly as it was in Europe.

Until well toward the end of the eighteenth century the vulgar arts led a sort of clandestine existence. Like the contemporary brothel, they were patronized by commoners and either ignored or persecuted by political and religious leaders. Novelists, playwrights, and most particularly performers, were treated as social outcasts, their status in society being somewhat comparable to that of the prostitute in contemporary life. Understandably, and to the great amusement of their audiences, these vulgar artists often devoted their talents to lampooning the airs and fancies of the social elite, a practice that did little to improve their status with the elite.

One aspect of the social revolutions that occurred in Western countries during the eighteenth and nineteenth centuries was the rise of the idea that the common people—which really meant the middle classes—could and should enjoy the “benefits,” including the arts, that had formerly been monopolized by the economic and political aristocracy. But since the middle classes, as well as the lower classes, were uninterested in the fine arts, even when they could gain access to them, the acceptance of this idea tended to mean the sanctioning of the vulgar arts. The end result has been that many once “vulgar” arts have by a process of social redefinition become “fine,” or at least respectable, arts. Thus the once vulgar Italian opera has become one of the contemporary fine arts, and the once vulgar novel has become a literary form. The process of refinement has been furthered by such technological innovations as the motion picture and the radio, which have elevated certain of the vulgar arts to the status

¹ See H. D. Lasswell, “Censorship” (*Encycl. Soc. Sci.*, vol. 3, pp. 290-294).

For material on contemporary censorship of the vulgar arts, see G. F. Bowerman, *Censorship and the Public Library* (H. W. Wilson, New York, 1931); M. W. Dennett, *Who's Obscene?* (Vanguard, New York, 1930); and D. Knowles, *The Censor, the Drama and the Film, 1900-1934* (Allen & Unwin, London, 1934).

of big business and which have enabled some of the artists, most notably comedians and singers, to gain great wealth—always a boost to the esteem one is accorded by the elite. Today successful actors and actresses for the masses have an enviable rather than a submarginal position in society and may mingle not only with respectable people but also with kings and princes; and novels are reviewed and sometimes written by proud men of letters and are read by mistress as well as servant girl.

Propaganda Art.—The conviction that the vulgar arts are a significant, and an evil, influence on the masses has not, however, been entirely dissipated. To that conviction has been added, rather, the belief that the vulgar arts may be made instruments for the improvement—or, perchance, the exploitation—of the masses. Novels, plays, motion pictures, radio dramas, murals, posters, and even musical compositions are therefore commonly judged in terms of their presumed social significance and are often devised with an eye to their propagandistic value.

Whether or not the arts are an effective means of propaganda is not known. A number of historical experiences do, however, suggest that, while propagandistic art may supplement other forms of propaganda, it does not by itself have any significant effects upon social action. During the Middle Ages almost all art, pictorial and otherwise, was religious in motif and was highly valued by the Church as propaganda; yet the power of the Church declined. The very popular Victorian novels of the nineteenth century extolled the values of the family and romantic love and proclaimed the frailty of women; yet throughout the period the importance of the family declined, divorce increased, and the drift of women into industry, trade, and politics increased perceptibly. The Communistic government of Russia perverted all the arts, music included, to propagandistic purposes; but after two decades of antireligious and antifamily propaganda (together with other more tangible efforts) the government had to confess its failure by giving sanction to the Church and to the monogamous family system.

Ideology of the Fine Arts.—The belief that the vulgar arts have some sort of social significance, normally evil but potentially good, has generally been accepted and acted upon without much discussion, perhaps because those who enjoy the vulgar arts are not, by and large, those who write and talk about art. The values, virtues, characteristics, and social import of the fine arts, on the other hand, have been stated and debated continuously. So much time and effort are, in fact, even now being devoted to discussion of the fine arts that the number and industry of art discussants may well exceed the number of creative artists. Certainly there are today more commentators—teachers, critics, literary biographers, etc.—on English literature than there are contributors to that literature; and perhaps there are more men engaged in writing critiques of the

drama than there are writing and producing plays. As a consequence of the interminable discussion of the fine arts there has grown up a tremendous body of aesthetic ideology; and ideological polemics have pretty well obscured the true function of the arts, fine or otherwise. This ideological encumbrance to the fine arts is sociologically significant, not because of what it is, but because of what it reflects and what it has done to the fine arts themselves.

Folk preoccupation with form and folk adherence to absolute value judgments are at present nowhere more strikingly revealed than in the ideology of the fine arts. Moreover, the general tendency for men to cling to the established simply because it is familiar is also most clearly manifest in art values. In a period in which almost everything social has become secularized, the fine arts still remain sacred. Few contemporary Americans would subscribe to the thesis that a seventeenth-century wagon is to be preferred to a twentieth-century automobile because it is older and was constructed entirely by hand; many do, however, accept without question the thesis that any seventeenth-century Rembrandt is much to be preferred to a contemporary painting. Few Americans would accept the view that they should equip their new home with water bucket, pitcher, and jar because that was the equipment of the best eighteenth-century homes; yet in their twentieth-century homes, complete with modern plumbing, heating, and lighting, they may stock their record cabinet with recordings of compositions by Mozart and other eighteenth-century composers. The contradiction arises from the fact that fine arts ideology has maintained a clear, if somewhat shifting, distinction between the fine and the vulgar arts by defining the fine arts in terms of rigid and largely traditional criteria.

In the evaluation of fine arts forms age is, broadly speaking, the only generally agreed upon standard. The contemporary product is debatable, and to it every critic will apply his own personal yardstick. But all can agree that a Grecian temple, a Roman statue, a medieval painting, or an eighteenth-century musical composition is old. And in fine arts ideology this seems to mean that the object has demonstrated its aesthetic worth by "standing the test of time." That the temple stood untended and unobserved for centuries or that the painting was long forgotten in somebody's attic is apparently irrelevant. The tendency to place a premium on age has undoubtedly been an important factor in discouraging experimentation in fine arts forms; and it has led, in some fields, to the attempt to make modern products appear ancient.

The vulgar arts are usually evaluated in terms of their box-office appeal, which is a rough index of the recreational satisfactions that they provide. Vulgar artists endeavor to be guided by public taste, which changes with time and circumstance. As a consequence, the vulgar arts

are dynamic rather than static. In the fine arts, however, there has been a distinct tendency to assume that anything that is popular is in poor taste and that only that to which the masses are indifferent can possibly be artistic. One result of this odd set of concepts is that in some instances a vulgar art form becomes a fine art form after it has lost its popularity with the masses. Shakespeare, the very vulgar dramatist of the late sixteenth century, has, for example, become a "fine" artist of the twentieth century. The Currier and Ives print that was the common man's pin-up of a century ago is now a collector's item, rare and supposed to have newly discovered artistic merit.

Art and "Culture."—The fact that the fine arts of today are patronized by a social elite has frequently been taken to mean that those who appreciate the fine arts are *ipso facto* members of that social elite. The idea behind social climbing via the fine arts is not, naturally, so baldly expressed; art, it is said, is "culture"; and culture is something that all the best people possess. The deliberate cultivation of "culture" is no doubt as old as civilization. Ambitious Athenian businessmen probably aped the manners and affectations of their social superiors; during the Renaissance Italian princes endeavored to outdo the archbishops in their reverence for things artistic, even as they were trying to outdo them in their manipulation of things political; and the bourgeoisie of prerevolutionary Europe drew many of its values, artistic and otherwise, from the aristocracy whom it was shortly to dispossess.

The cultivation of "culture" in America has stemmed from the belief, propagated if not originated by Europeans, that America lacked any true appreciation of the fine arts and that this lack revealed the provincialism and crudity, if not outright barbarousness, of American society. In the minds of many Americans the way to make American society mature, sophisticated, and genteel was to import and cultivate the fine arts of Europe. By the close of the last century, for example, it was firmly established in American folklore that no town was really more than a backwoods village unless it had an "opera house," a music teacher or two, some budding musical genius, a poetry club, and other evidences of Old World "culture." Opera houses were built in the strangest places; and an odd assortment of people took up such aesthetes as Oscar Wilde, while still others bought paintings and other art objects, some going so far as to import from Europe antiquated manor houses and feudal castles.

This cultivating of "culture" in America was supplemented by the going to Europe to acquire fine arts sensibilities. For many decades travel to Europe was not, in theory, a pleasurable vacation but an artistic pilgrimage (somewhat comparable to the Moslem's religious pilgrimage to Mecca), in which the tourist turned toward such places as Stratford-upon-Avon, where Shakespeare was born and buried, the Louvre,

Chartres cathedral, and other centers of art or art sentiment. All this was supposed to "broaden" one and to overcome one's personal handicap in having been born and reared in America. In a society addicted to this belief, cultivating art no doubt did give one a certain local prestige. To have actually seen the Mona Lisa was almost as elevating as having been born into one of the right families.

Art in Education.—Until well into the present century the American theory that the cultivating of fine arts appreciation was a means to personal improvement had little effect upon matters of public policy. European art tours, private music and art teachers, concert companies, and other touring artists satisfied the individual craving for self-improvement via the art route. Gradually, however, the idea of personal improvement via the arts was merged with the old belief that the vulgar arts have a significant, and mainly degrading, effect upon the masses. The result was a new ideology of social reform. The middle and upper classes, the backbone of the nation, appreciated poetry and classical music, attended concerts and opera, etc. The lower classes, however, were not only ignorant, poor, and uncouth but were entirely lacking in good taste; they liked brass bands and vaudeville and read nothing but trash. They did not, therefore, strive to improve themselves. If, so the new ideology of reform ran, the lower classes could be brought to appreciate the fine arts, they would abandon the beer halls and take to the concert halls and thus would be started on the road to good citizenship if not to wealth. (Just one of the many facts ignored by this ideology was that at that time Italian and other poor immigrants were among the most enthusiastic supporters of one of the fine arts in America, the opera.)

Out of this faith in the generally elevating value of the fine arts came the practice of trying to teach art appreciation in the public schools, a practice that led to a boom in the production of art teachers by the colleges and universities and the evolution of the idea that even higher education should contain a considerable proportion of aesthetic training, including such nonutilitarian subjects as Greek and Latin, the philosophy of the ancients, medieval architecture, etc.¹

Two and more generations of teaching art appreciation to school children has not brought any apparent change in public taste. The majority of the American people, like the majority of people the world around, insist upon being amused rather than edified when they go to the theater, turn on the radio, or pick up a book. They also still show a marked

¹ A reverse application of this ideology is the recurrent attempt to revive various "folk" arts—dancing, music, and the more useless of the handicrafts. Such revivals are often fads without serious intent. Occasionally, however, they are predicated upon the belief that the presumed social virtues of another day can be reestablished by reviving the recreational activities of that day.

preference for photographs of recognizable contemporary scenes to indistinct paintings of ancient things; and while the line in front of a motion-picture house may be a block long, there is never much of a crush in an art museum. The continued indifference of the masses to the fine arts has, however, saved the fine arts for the social elite and has thus assured their continued definition as "fine."

Art and Science.—The attempt to lift up the masses by an artistic bootstrap has in general given way to more prosaic, and more feasible, educational programs, such as vocational training. But the belief that the fine arts are somehow of prime social significance has nevertheless persisted. This belief is so strong that it actually hampered the Allied military forces during the Italian campaign of 1943, for the military felt impelled, out of consideration for American and British public opinion, to avoid insofar as possible destroying the artistic relics with which Italy is littered. And it is this belief that at the moment seems to jeopardize the future of the sciences.

Art and science are functionally no more incompatible than are religion and science. The one deals with nonutilitarian values and the other with utilitarian matters; the one caters to man's need for recreation, and the other to his need for food, freedom from disease, etc. When spokesmen for the arts claim for the arts utilitarian significance, they are then encroaching on the sciences. And when, as is the present trend in American universities, their claim becomes the basis for action, the sciences are, as was indicated earlier, endangered.¹ The fine arts, including that verbal

¹ This matter has nowhere been more clearly stated than by E. Faris in his review of a recent translation of a book by an early nineteenth-century European mystic. Faris says:

"For the sociologist the point of great interest is not the accuracy of any interpretation but rather the extraordinary fact—and it is extraordinary—of the great vogue which this author [S. Kierkegaard, spiritual grandfather of the current cult known as "existentialism"] enjoys in these war years. . . . There is a current reaction against the scientific method and all it implies. Neoscholasticism, now so vigorous, is but one symptom. Epithets are hurled and men berate 'scientism,' which they blame for our present woes. Science and 'the machine' are said to cause our wars. Faith is lacking, and so the world is bathed in blood. And yet there was once a war which ran for thirty years at a time when there were no machines in the modern sense, and the seventeenth century witnessed Christians killing other Christians for the sake of a creed. Half the population of Saxony were exterminated in an age when all Europe professed the Christian faith.

"But still many are bewildered and many grope in darkness and in dread. They have lost faith in the ability of men to solve our problems and yearn for some absolute authority. Because scientists have not yet solved all our problems, they belittle what we have done and deprecate the efforts of those who are striving to discover the secrets of nature, all nature, including human nature, so that our lives may have intelligent direction.

"They have lost their nerve. They cry out that we should have ideals, not realizing that such an appeal is sheer magic if it neglects to discover the conditions under which this is possible. . . ." (*Amer. J. Sociol.*, vol. 50, pp. 403-404, 1945.)

art known as philosophy, may be desirable as such; but they are not and cannot become a substitute for knowledge. Although men do not live by bread alone, they must have bread in order to live; and in the growing of wheat and the making of bread, knowledge is imperative.

The current tendency to elevate the fine arts, most particularly the fine art of medieval ideological disputation, to a position of eminence in university education has an interesting and suggestive historical parallel. It will be recalled that during the Middle Ages the Church, feeling its authoritarian status endangered, did everything possible to discourage the development of science. At the same time that it persecuted would-be scientists, it encouraged artistic endeavor, including the building of many huge cathedrals, thereby providing an alternate, and from the Church's point of view harmless, outlet for the energies and initiative that the disequilibrium of medieval society was generating. This distraction technique, an ancient and still honorable device of political leadership, did not prevent the growth of science or the ultimate decline of the Church. But the artistic renaissance that was fostered by the Church may well have postponed for a century or more the politico-religious Reformation. The common man was kept so busy building cathedrals to the glory of God that he had little time to ponder his own earthly predicaments, and the intellectuals were offered such rich rewards for artistic endeavor that few minds were free to question the dogmas of the Church. In the present situation there is nothing comparable to the organized conspiracy against science that developed in the Middle Ages. But for some current vested-interest groups the fine arts do have the great virtue of being excellent devices for distracting attention from more important matters.

ART AND SOCIETY

Art ideology has played and continues to play a varied but significant role in Western societies. The arts themselves, however, have little direct bearing upon other aspects of social life. Certainly the attempts that have been made to find in specific art forms the causes of certain other social phenomena are not impressive.¹ Art values have occasionally delayed the full exploitation of new techniques; domestic architecture, for example, is far behind functional possibilities, largely because people value certain old architectural forms above economy and convenience, even as the automobile still has the motor out in front for no better reason than that

¹ For a variety of such attempts, see W. D. Allen, *Our Marching Civilization* (Stanford University Press, Stanford University, 1943); H. M. Kallen, *Art and Freedom* (Duell, New York, 1942); H. Blumer, *Movies and Conduct* (Macmillan, New York, 1933); J. K. Forman, *Our Movie Made Children* (Macmillan, New York, 1933); and M. Thorpe, *America at the Movies* (Yale University Press, New Haven, 1939).

the horse pulled rather than pushed the buggy. Neither the fine nor the vulgar arts, however, have significantly determined the direction of technological development. On the contrary, the new technologies have profoundly influenced the vulgar arts. The development of techniques for the electrical amplification of sound, to take but one illustration, led to a revolution in the art of popular singing; the barrel-chested, loud-voiced stage singer gave way to the small-voiced crooner. And, as has been indicated, it was technological changes and their social repercussions that made the vulgar arts such an important element in contemporary society.

That the new modes of entertainment—newspaper, magazine, cheap book, motion picture, and radio—have lessened the dependence of the individual upon family and other intimate groups for his recreational satisfactions cannot be doubted. But that these new modes of recreation have disrupted family or community life is not true.¹ The deterioration of institutional forms, such as the family, has been wrought by the profound changes, discussed elsewhere, in technology, in work organization, and in the economic and social relations that are dependent upon technology. The new vulgar arts merely satisfy a need that arises from the deterioration of the family and other primary forms of group life.

Art as Socially Reflective.—It is possible to find a great many parallels between art forms and other aspects of society. Most of the pictorial art of the Middle Ages, when religion was a dominant concern, dealt with religious subjects. Today popular music is frequently timely (when, for example, the automobile was new and interesting, a number of automobile songs became popular; later there were songs about flying; and every war produces a number of war-theme songs); and short stories, novels, and plays frequently deal with current interests and current situations. From such observations has come the theory that art, which is certainly not a determinant of social life, may well be a reflector of social life. And proceeding on this theory, some social historians and philosophers have attempted to ascertain the social life of a people from study of their art forms.² The Victorian novel, for example, is sometimes cited as evidence that during the Victorian period people led a gracious, decorous, and very pure life. The Victorian novel never hinted and certainly never

¹ S. Riemer ("Sociological Theory of Home Adjustment," *Amer. Sociol. Rev.*, vol. 8, pp. 272-278, 1943; and "Maladjustments to the Family Home," *Amer. Sociol. Rev.*, vol. 10, pp. 642-648, 1945) thinks, on the contrary, that in at least one instance, domestic architecture, old art forms actually deter the working out of more harmonious family life.

² One of the more esoteric of the fine arts is that described as "literary criticism." Ideologically, the participants in this field are supposed to provide an evaluation of society. Actually they operate in a closed system, each "evaluating" the evaluations of others without any reference to social realities. See B. DeVoto, *The Literary Fallacy* (Little, Boston, 1944).

indicated that gentlemen frequented brothels (a practice that was quite definitely a gentlemanly recreation in those days), that childbearing was anything but a lovely experience, that women were ever lustful, or that men ever engaged in arduous labor or cheated one another in a business way. All that can really be deduced about life in the Victorian era from the prudish Victorian novel is the literary taste of those who read novels during the Victorian period. Art, most especially vulgar art, does reflect artistic values, for it caters to them. There is, however, no fixed and mechanical relationship between artistic values and social conduct. The fact that a man happens to enjoy religious music does not mean that he is a religious man; nor does the fact that he happens to like brothel-derived hot jazz mean that he is a brothel patron. The fact that motion-picture stars and cover girls are invariably slim of hips does not mean that modern women characteristically have streamlined physiques or that the woman who is not streamlined will lack attentive males.

Art forms are social and are socially produced. The motion picture is a product of modern society, just as the orgiastic dance is a product of certain primitive societies and the religious painting was a product of medieval society. But the relationship between art forms and society is not a fixed and unvarying one.¹ Very modern Americans may enjoy very old-fashioned art forms; and very old-fashioned Chinese may cultivate a taste for modern American music, without adopting all the rest of the things that are characteristically modern. Art is, therefore, a very dim reflector of society. To have some art forms is essential to every society, particularly in societies such as ours where most recreational satisfactions are secured via the arts. The specific nature of those forms, however, is of no moment. If they provide recreational satisfactions, they serve their function; and what is pleasing or diverting is entirely a matter of taste and has no reference to intrinsic or inherent attributes.

The arts, in sum, are the least important and the most variable of the elements that enter into the social structure. They are the designs embossed upon the textile of social life. The designs must please to be effective; but no matter how pleasing, they will in no way affect the utility and durability of the fabric itself.

¹ For data on and further discussion of this point, see J. H. Barnett, *Divorce and the American Divorce Novel, 1858-1937* (privately printed, Philadelphia, 1940); H. A. Bloch, "Toward the Development of a Sociology of Literary and Art Forms" (*Amer. Sociol. Rev.*, vol. 8, pp. 313-320, 1943); W. T. Fontaine, "'Social Determination' in the Writings of Negro Scholars" (*Amer. J. Sociol.*, vol. 49, pp. 302-315, 1943); J. H. Mueller and K. Hevner, *Trends in Musical Taste* (Indiana University Press, Bloomington, 1942); T. C. Pollock, *The Nature of Literature: Its Relation to Science, Language and Human Experience* (Princeton University Press, Princeton, 1942); L. L. Schücking, *The Sociology of Literary Taste* (Oxford University Press, New York, 1945); and A. S. Tomars, *Introduction to the Study of Art* (privately printed, New York, 1940).

Chapter XIV

SOCIAL ORGANIZATION

SOCIAL organization, the most intricate and complex of the components of society, is the central concern of all sociological study. Upon the organization of a society depends, as has been indicated repeatedly throughout the preceding chapters, the extent to which its technology is exploited; and upon the organization also depends the character and social validity of its ideologies and the range and utilization of its knowledge. Organization cannot be regarded as the most important of the social components, for all are essential to social life, even as heart and lungs and stomach are all essential to the life of an organism. But the relatively greater intricacy and complexity of the organizational component has meant that men's major failures—and likewise their greatest achievements—have usually occurred in the realm of organization. Most of the wars of history have turned on the matter of organization and the leadership that organization makes possible. Most of the societies that have failed to survive through time have died from organizational inadequacy. And it is primarily because the organizational component is relatively more complex that our present knowledge of physical and biological nature and our techniques of control are so far in advance of our knowledge of social organization and our organizational abilities.

The organizational component consists of all the ways by which men live and work together, more specifically of all the programed, ordered, and coordinated relations of the members of a society. The program may be deliberately planned by one or all of those who enter into a relationship, as is the case when a mother plans a picnic lunch for her family or a union arranges to go out on strike on a certain day. Most of the programs of men, however, are cultural plans, traditional blueprints, worked out in the past and handed on generation after generation. The over-all program of family life, for example, is a cultural plan, more or less ready-made for bride and groom when they enter into marriage. The order in social relations stems, of course, from the existence of the plan, but it may come about in any one of a number of ways. Those who participate in the program and follow the prescribed procedure may do so because they are forced to do so; slaves, for example, are driven to do their master's bidding, and citizens are coerced into paying their taxes. More commonly, those who adhere to the plan do so either because adhering to the plan is or seems to be to their personal advantage, or be-

cause through socialization they have been trained to do so and cannot conceive of doing otherwise. The coordination in an organized relationship may be a mere unison of action of the individuals involved, such, for example, as the marching of soldiers, each of whom does much the same thing but does it in harmony with all the others. Coordination is ordinarily, however, far more complex; for most organization involves a functional differentiation of actions, each of which, although meaningless in itself, fits in with all the others to contribute to the whole. Each of the men on a baseball team, for example, has a special role which is so designed that it complements each of the other roles, with the result that the "team" is far more than the sum of its organizational parts.

The Institutional Approach.—The organizational component may be examined from a number of vantage points. In the chapters on communication and transportation, for example, organization was considered in terms of the extent to which it was primary, operating on the basis of face-to-face contact, or secondary, involving large numbers of persons in relatively impersonal relationships. Organization may also be analyzed in terms of the particular aspect of social life involved—political, religious, economic, recreational, educational, etc. In this chapter attention will be focused on social organization per se, its nature, processes, and structural characteristics; and for this purpose organization can be most effectively examined in terms of the degree of institutionalization involved. The basic organization of every society includes some highly institutionalized systems of human relationships; moreover, all modes of organization evidence some institutional attributes and tend to become increasingly institutionalized with the passage of time.

CONVENTIONS

Some of the elements of the organizational component of a society are simple and comparatively discrete patterns of person-to-person adjustment. These patterns, usually designated as conventions, are the least institutionalized aspects of organization; they are not involved in the formation of enduring associations, as are most elements of organization, but are, rather, means for expediting transitory encounters. They are cultural formulas by which people can organize their relationships when circumstances make some sort of temporary organization desirable.

Function of the Convention.—Recurrently arising within the framework of any social system are a considerable number of human relationship problems that, while not of vital and long-run significance, must nonetheless be solved in some way or other. The meeting of persons on a narrow path, for example, and all like encounters present problems of human adjustment. How they are solved does not matter; what is important is that they be solved quickly and with satisfaction to the persons

involved. Whether on a narrow path one person steps aside to let another pass or both step halfway to the right (or to the left) makes no great difference; but both must agree as to what each should do.

Agreement can, of course, be reached by trial and error, provided that the interests of those involved are not antagonistic. But joint solution by trial and error of a common adjustment problem is invariably time-consuming and under some conditions actually hazardous. Consider, for example, what would certainly happen were motorists to resort to trial and error in determining which of them should have right of way at an intersection. By eliminating the need for trial and error, conventions make for efficiency and convenience in the resolution of the brief encounters of social life.

Types of Conventions.—The simplest type of convention is that which coordinates simultaneous actions. The walk-to-the-right convention is of this type; adherence to it assures that people can pass each other on the street and elsewhere with a minimum of difficulty. If people who are coming from opposite directions ignore the convention, they may be forced to resort to some trial and error (dodging back and forth) before the situation is resolved. Passing people on their left, shaking hands upon meeting, terminating a conversation with "good-by" or some such phrase, and walking abreast and in step are a few of the great many simple conventions by which modern people resolve the recurrent little problems of human relations.

Somewhat more complex is that type of convention which determines the order in which similar actions occur. Thus when the doorway is narrow and two or more persons wish to enter, each takes his turn in accordance with the conventionally indicated order of entry, which may, perhaps, give precedence to age over youth, to wealth over poverty, to the female over the male, etc. The precedence indicated by such conventions is generally a reflection of relative status in the more basic aspects of social organization; whether it is or not, the convention facilitates the relations of people who have happened to come together under conditions that prevent their all doing what they want to do at the same time. In contemporary societies, particularly in urban life, a great many such circumstances arise. Modern people are constantly getting on and off streetcars, elevators, and other public conveyances, into and out of doorways, and taking their turns in purchasing tickets and other things; and although the conventions are not very well defined and are not always adhered to, the fact that people are constantly doing these things without thought and without sustaining injury suggests that the conventions are reasonably effective. Rarely is it necessary to fight for one's place in line; and no one considers it at all strange that a big man may give right of way to a little fellow.

In most modern conventions precedence is largely chronologically determined; the first come is the first served. Age, sex, and class position have little bearing on precedence in conventions today, a reflection of the lessened importance of these factors in the basic forms of social organization. Within the last few decades, for example, the practice of giving women precedence over men has increasingly fallen into disuse, mainly as a consequence of the fact that sex differentiation is less pronounced than it was a generation or two ago.

The most complex type of convention is that which fixes the sequence of a number of different actions. Formal exchanges of greetings, formal invitations and replies, announcements of weddings, deaths, and births and responses to those announcements, and a great many other person-to-person interchanges may be so conventionalized that each person knows exactly what to do and when to do it. This type of convention usually applies to relationship problems that have inherent potentialities for embarrassing those involved. The relations of train traveler and Pullman porter, for example, are not those of friend to friend or of customer to seller; nor do they quite fit into the category of master to servant. The simple tipping convention of outstretched palm or coin left on the dinner table does not apply. To meet the peculiar difficulties of this particular situation there has developed a little ritual: toward the end of the journey the porter bustles up with whisk broom and the suggestion that a brush down is in order, and the traveler submits to the brushing, after which he gives his tip. Similar in type and in function is the rather conventional manner in which a guest, after an evening of semiformal conversation, takes his leave; he suddenly discovers how rapidly the evening has slipped by, the host protests that the evening is still young, both arise, and a departure is effected.

Differential Conventions.—Every society and every class and other group within a society has its own peculiar conventions. Upon meeting, two Chinese men bow slightly with their hands clasped before them, whereas two Westerners shake each other's hand. The upper class or classes of most societies adhere more rigidly to conventions and have more elaborate conventions than do the members of the lower classes, possibly because they have more time to dissipate in "formalities." In some strata of American society it is the convention for young men to initiate a flirtation in a forthright and direct manner and with some such opening gambit as "Hi ya, Babe!" after which the young woman is to respond in similar vein. In other strata of our society this pattern would be quite unconventional and the prescribed convention for achieving the same end is more involved and circumspect. In most societies the conventions that women utilize among themselves are somewhat different from those that men utilize among themselves. Thus in Western societies

women may kiss upon meeting, whereas men shake hands. Generally, too, special conventions are applied to intersex relationships. Thus when men and women meet, women smile and nod and men tip their hats. Each regional, ethnic, and occupational group may also have some special conventions of its own. Priests have their priestly conventions, lawyers their court and other legal conventions, and taxi drivers have a number of driving conventions that expedite the movement of taxicabs and intimidate other drivers.

The fact that conventions differ from society to society and from group to group means that conventions often complicate intersociety and intergroup relations; and a good deal of the friction and misunderstanding that ordinarily arises when people of different societies, classes, or other groupings come together may be traced, as will be indicated in detail in a later chapter, to their different conventions. To the Englishman traveling in America it is disturbing, to say the least, to find that the shoes he sets outside his door in the hotel corridor are stolen rather than polished during the night. It is equally disturbing to the American in England to receive a blank stare in return for his friendly smile; Englishmen, he will report, are a cold and unfriendly lot.

Conventions and Other Aspects of Society.—A considerable proportion of every culture consists of conventional patterns of person-to-person relationship, into the proper use of which most members are trained. In considerable measure it is how well the individual follows the conventions that determines how he is regarded by his associates. In any society an unconventional person is irritating, for he does the unexpected rather than the expected. He makes it awkward for people to get through doors with him and into and out of conversations and other relations in which he is involved. The unconventional person may therefore be considered "difficult," and he may even be somewhat ostracized. It is most unlikely, however, that he will be considered immoral; for conventions are generally taken by the members of society for what they are—devices of convenience—and are not supported by ideologies that make them matters of morality, sacred in origin and hence necessary for the survival of the group.

As a consequence, conventions tend to reflect rather than to influence other aspects of a society. As one or another aspect of the society changes, relevant conventions also change. The flexibility of conventional forms is well illustrated by the rapidity with which old, preponderantly rural conventions were, with the growth of urban and industrial modes of life, abandoned and replaced by new conventions. With the coming of the telephone, for example, it soon became the convention in polite society in America to express appreciation for having been included in a dinner party via the telephone, rather than calling in person, as had formerly

been the convention. When towns became cities, the convention that had required fellow townsmen of the business class to stop upon meeting, shake hands, and engage in an exchange of opinions about the weather, the state of the nation, etc., was inappropriate and troublesome and was soon abandoned. City life did not adjust itself to this or any other convention; rather, the conventions were discarded or modified to meet the new problems of relationship that urbanization created.

INSTITUTIONS

At the opposite extreme from conventions are institutions, the most complex, rigid, and significant aspects of the organizational component.¹ As factors in social life institutions are as important as the technology, and in many respects more so; for the social efficiency of any social group depends largely upon the effectiveness of its institutional arrangements. Antiquated, malfunctioning, and conflicting institutions are, for example, the primary factors responsible for the plight of the peoples of contemporary India.

The Institutional System.—An institution is a system of human relationships, each specific element of which is more or less effectively coordinated with every other prior and subsequent element, for the fulfillment of some long-run group need or combination of needs. Any specific institutional element, such as a marriage ceremony or the obeisance that a subject shows his king, is unimportant in itself. It is only one of a multitude of functionally interdependent elements that *in toto* constitute the institutional system.

As a plan for the fulfilling of a social need, an institutional system is in some respects comparable to the calculated plan by which any modern construction project, say an office building, is carried out. Before any work on the building is begun, architects and engineers will have planned not only what the completed building will be but also the entire procedure, step by step, through which it will be built. In accordance with this plan of construction, various industrial plants, scattered throughout the country, will produce a great variety of materials and equipments, each piece of which will arrive at the building site in accordance with a predetermined schedule. Structural steel, cut and drilled to specifications, premixed concrete, cut lumber, etc., will flow to the building site as planned. And on the job itself a variety of specialized workers will assemble and fabricate the structure. Each incident in this vast enterprise—the installation of an electrical outlet box at a given point along a wall, for example—is to a considerable extent predetermined. Although no one of the workers may have much interest in or even understanding of the

¹ The best general analysis of institutions per se is J. O. Hertzler's *Social Institutions* (McGraw-Hill, New York, 1929).

way that his particular tasks fit into the whole, the work of each is co-ordinated to the end that in the course of months or years there emerges an office building, complete in detail, even perhaps to the provision of an electrical outlet for the adding machine of a tenant who leased a suite of offices while the building was still in the planning stage.

An institution is, of course, vastly more complex than the construction plan for an office building. It is cultural rather than calculated in origin, it covers years and centuries rather than months and years, and it may be followed simultaneously and at various stages by a great many groups of people. At any moment, for example, hundreds of family units may be adhering more or less faithfully to the institution of family life, even as people have been following that system of relationships during the centuries before and may follow it for centuries still to come. At that moment a child may be born into one such family unit, an elder may die in another, a child may be spanked in still another, and at the village church a new family unit may be in the process of becoming. None of those who participate in an institutional relationship will realize that they are behaving in terms of a cultural plan and that what they are doing is of importance only insofar as it has bearing upon subsequent and interdependent relationships. Thus the bereaved son may think that his observance of the burial rites is an end in itself, and the bride at the altar may view her wedding as a major event in her life; but from the social point of view these and all other institutional patterns are socially significant only as elements in a continuing system of life.

The Institutional Group.—Institutions are manifest as predetermined patterns of interaction between the members of a specific social group. The number of groups that may at any moment be following the institutional system varies from institution to institution. With such institutions as the family, the clan, and the tribe, a great many small groups are invariably involved. With some of the larger institutions, on the other hand, such as monarchical or representative government, only a few large groups are involved.

Whatever its size, the institutional group is, however, an enduring social unit. The relationships of its members are not necessarily continuous; even the members of a family unit go their separate and independent ways outside the home. Their relationships are, however, recurrent; the same people come together over and over, each time enacting a bit of the institutional plan. In order to assure that only qualified individuals participate, the membership of this group is institutionally defined; only those who have attained membership in accordance with some institutional procedure—birth, adoption, marriage, or induction—can belong. The result is a closed group; a stranger may be invited to eat at the Jones family table, but only a Jones can be a member of the Jones family.

The institutional system also provides socializing procedures to assure that the neophytes will learn to behave in accordance with the institutional patterns. Thus the infant is brought up to conform to family or tribal life, the future priest is trained into the practices and precepts of the Church and of his particular Order, and the bank teller is indoctrinated into the principles and practices of the banking system.

The membership of each institutional group is formed into a hierarchy on the basis of such factors as age, sex, achievement (measured in accordance with some fixed scale), and birthright. The status of each of the members and the individual functions of each are thus dictated by the institution itself. In the old patriarchal family system, for example, the eldest son of the patriarch inherited the position of patriarch upon the death of his father; and the patriarch's commands were, in theory at least, obeyed by all the other members. Under this system also the role of women was distinct from that of men; women were by institutional decree required to run the household, while men cultivated the fields, managed the flocks, or labored in the market place.

Each institutional group has its designated leader (or leaders), but the leadership that he exerts is in terms of the institutional system rather than his own personal interests and ambitions. A father, chieftain, king, pope, or bank president guides his inferiors in the institutional ways but does not himself work out the ways that are to be followed. Leadership of an institutional group is thus somewhat analogous to the leadership of an orchestra; the leader conducts the group in the rendition of a predetermined score.

Institutional Functions.—Every going institution has an elaborate ideology that makes adherence to the institution imperative. Although it presumably grows up along with the institution, once developed, the ideology helps to maintain the institutional group and the institutional practices. In the ideology, the institutional patterns must be adhered to because they are innate or are prescribed by divine will or for some equally simple, understandable, and inescapable reason. Actually, of course, the institution is the embodiment of empirical experience, what is commonly called the wisdom of the ages; and it is adhered to because it has become established in the culture.

The functions of all institutions are long run and collective. In some instances the institution centers around the fulfillment of a single group need. Thus the medieval guild system operated to satisfy an economic need, and the medieval Church a religious need; and the system of representative government satisfies a political need, and an army or navy a military need. In other instances the institution functions to satisfy a complex of social needs. The ancient patriarchal family, for example, was at once economic, political, and religious; and the feudal system was eco-

conomic, political, and military. In the more complex societies, however, it is more common for a number of related institutional systems to center around a common social need. Today, for example, economic needs are satisfied by such diverse institutions as government, private property, and corporate business.

The functional effectiveness of any institution depends first upon the compatibility of the various elements of the institutional system and second upon the context within which the system operates. By analogy, an institution is like an automobile in that it will operate effectively only when all its many parts fit together and are in good repair and then only where there are roads and service stations. A functioning institution is a delicate balance of social forces, all equilibrated within the physical, biological, and social circumstances that surround it. A functioning institution is perhaps the ultimate in human design, a social structure of more parts and more complex parts than any physical edifice or structure that man has yet devised.

The Chinese Family: an Illustration.—The great complexity of a functioning institution can perhaps be most clearly seen in the old Chinese family system. This institution operated in a context of other institutions—including the craft guild (in structure very much like our medieval guild), private property, governmental bureaucracy (the so-called “examination system”), and monarchy—with all of which it was necessarily articulated.

Ancestor worship, formalized as Confucianism, was the ideological base for the family system. It set an incentive for every individual to perpetuate his family line and to maintain its prestige. Elaborate rituals that stressed the importance to the individual of his descendants surrounded all such family events as birth, marriage, and death; and each family had its household ancestral shrine at which certain rites were performed daily.

Although membership in family units was normally achieved by birth, the institutional system provided means by which a family unit could supplement its membership when and if a sufficient number of male children were not born to it. Thus a family without sons could arrange to have their daughter’s husband come to the family (rather than her going to his, as was the usual practice) and become the son of the family, assuming its name, etc. Generations later the family might be called upon to return the “borrowed” son. The taking of concubines was another such emergency measure for securing needed sons for the family.

Marriage, an integral part of the family system, was a contractual arrangement between the heads of families rather than a personal arrangement between bride and groom. From infancy a girl was taught that she would in due course, if she were fortunate, enter another family unit as wife and daughter-in-law and that she would be expected to bear many

sons and in every way cater to the wishes of her mother-in-law. Since an unmarried adult daughter would be of no value to a family and since prospective mothers-in-law would be disinclined to accept as a daughter-in-law a girl who was inadequately trained, it was incumbent upon parents to train a daughter properly—which meant to train her to play well the role of wife and daughter-in-law as institutionally defined. Moreover, since the family unit in which she was reared was in all its salient aspects a replica of the family into which she would go at marriage, she normally grew up to acquire the sentiments, values, etc., that would be appropriate to her life in the family of her future husband. The institutional system provided, furthermore, for her being returned to her parents if she should fail to fit into her husband's family, much as an automobile part that fails to come up to specifications is rejected by the mechanic and returned to its manufacturer.

Although these few illustrations may suggest something of the complexity and the long-run group functions of the old Chinese family system, they do not begin to indicate its scope. Almost every detail of the daily life of family members had some institutional significance and was partly if not wholly an expression of the institution rather than of individual whim or fancy. The seating arrangements at table, the greeting of parents by children, the kinship terms of address, the dowry brought by a bride to her husband's home, the coffin purchased and slept in by the elder during his declining years—all these and many more practices were functional elements of the family system. Centuries of experience had gone into developing this system of social organization; and once it had acquired its basic characteristics (about 200 to 300 B.C.), it was maintained more or less unchanged for more than ten centuries and by millions of people, surviving the rise and fall of dynasties, a succession of conquerors, and recurrent famine and pestilence. Only now, after three centuries of contact with the West and the adoption of many technological, economic, ideological, and other importations from the West, has that family system begun to lose its functional effectiveness.

INSTITUTIONS AND SOCIAL CHANGE

A functionally effective institution maximizes group effort and minimizes resort to trial and error and the wastage of time and energy that trial and error necessarily involves. It so coordinates the efforts of the members of the institutional group that the effort of each contributes to the welfare of the whole over the long run. As a consequence, functioning institutions make for the fullest social return from a given level of technology.

At the same time, however, a functioning institution acts as a check upon technological invention and borrowing. A particular system of land-

ownership and land usage, for example, may make for efficient use of ox and wooden plow; but since the institutional system is geared to ox and wooden plow technology, it serves to stabilize this technology and to discourage any improvements in cultivation techniques. Thus in contemporary Spain and elsewhere feudal survivals in the form of a landlord-peasant system of land usage hinder the adoption of any of the more significant modern techniques of agriculture. As a consequence, Spanish agriculture is by and large premodern; until the landownership and land-usage system is changed, the introduction of such devices as the tractor and gang plow is improbable. Faced with similar circumstances in Russia, the Soviet government instituted in the 1920's an institution-smashing program; and it was not until and only to the extent that the land was finally collectivized that tractors and other devices and techniques of modern agriculture could be applied and a sufficient number of farm workers released from the land to man the industrial plants that the Soviet leaders were bent upon having.

Under conditions of social equilibrium the special virtue of an institution is its maintenance of complex modes of group life. Under conditions of change, however, technological or otherwise, this virtue becomes a vice; for the institution then perpetuates inadequate practices, and its resistance to change deters the development of a new order of equilibrium. The social history of Western peoples over the past five hundred years has been in considerable measure a series of conflicts between new techniques and old and inappropriate institutional forms. Feudalism, Catholicism, familism, guildism, nationalism, and various other institutions have each in turn and in different ways delayed the adoption of new techniques, made for inefficient application of those techniques when they were adopted, and retarded the development of new and functionally more effective modes of social organization. Whereas a functionally effective institution is a marvel of human ingenuity, a malfunctioning institution is a denial of the adaptability of man.

Individual Inertia.—The resistance of an institutional system to change of any sort is not, of course, the resistance of an abstract pattern of human relationships. It is the resistance of members of institutional groups, actual, living people who struggle to maintain the institutional forms. Some of those who struggle to preserve institutional forms that have lost or are losing their functional effectiveness do so in calculated self-interest. In the main, however, resistance to change is more automatic than calculated, more a matter of sentiment and habit than of thought.

As the member of an institutional group, the individual is accustomed to relating himself to the other members of his group in the institutionally prescribed ways. He is used to treating his father with respect; he is habituated to being subservient to his lord; he is accustomed to con-

sidering the money that he has deposited in the bank as his own to do with as he pleases, etc. Any deviation from such accustomed and sanctioned patterns is therefore a violation of his sentiments, his habits of action, his beliefs, and his concept of what is right.

The inertia that results from habit, mental as well as manual, is everywhere evident. Unless the old ways have become exceedingly painful, the old ways are always best. Inertia is most marked in regard to institutional practices, for an institutional system most fully and most successfully indoctrinates the individual into habitual acceptance of it. Because the members of the institutional unit have been selected and socialized into the institutional pattern, they think and act in institutional terms; and the motivations, interests, values, and attitudes that are appropriate to the institutional way of life are to them inevitable and normal. These characteristics are, as a matter of fact, so deeply embedded in the personalities of institutional members that they have frequently been mistaken for biological attributes. The "instinct" of paternity, mother love, the profit motive, and all other such so-called "innate" characteristics of men are actually institutionally established and institutionally maintained modes of conduct and thought.

The Stifling of Initiative.—The induction of the individual into the patterns of an institutional system in still another way makes him resistant to change. As he acquires modes of institutional behavior, his energies and interests are canalized. Every random action that is contra-institutional is discouraged; the child who contradicts his father is scolded or spanked, the novice who ventures to read an unpriestly book is reprimanded, the soldier who does other than he is ordered to do is disciplined, and the man who tries to draw out of the bank more money than he has put in is taken off to prison.

The directing of energies and interests into institutional channels hinders the development of individual initiative and discourages the expression of such initiative as has inadvertently been acquired. As the son of his father, a boy in the old patriarchal family learned to want to keep the family unit intact and prospering; but if he were the second rather than the eldest son, he also learned that the way for him to help keep the family intact was to obey his elder brother when their father died. As the second son he learned not to want to become patriarch, that that position was the right and duty of his elder brother. Similarly, by the very fact that throughout childhood and youth the girl in the old Chinese family was continually being taught the beliefs, values, and modes of conduct appropriate for a wife and daughter-in-law, she was being taught not to want a romantic marriage, to run away to the big city and secure the things provided there, or anything else that was inappropriate to her future institutional role as wife and daughter-in-law. Her

greatest ambition would normally be that of becoming, in due time and without resort to uninstitutional tactics, a mother-in-law.

Institutional Deterioration.—When in spite of institutional resistance technological and associated changes have disturbed the functioning of an institution, the institutional system begins to deteriorate, however slowly, in one of two ways. Either it gradually loses its ability to maintain the institutional group membership or else it comes into conflict with a new, voluntary form of group organization that is highly adaptive and aggressive. In the first instance the institution is eroded away, bit by bit and almost person by person, much as soil may be worn away grain by grain. In conflict with a more dynamic organizational form, the institution is destroyed by its inability to compete, much as an antiquated business is run into bankruptcy in competition with a more ingenious competitor. In some instances, as was the case with the decline of the feudal system in western Europe, both processes are involved.

The erosion of an institution is perhaps best illustrated by what has been happening to the family in Western societies, a subject that will be considered in more detail in the following chapter. A great many factors, all related to the new technologies, have in recent centuries and most markedly during the past century tended to wean away family members. On the one hand, the family unit has gradually lost one of its prime institutional functions—the production and provision of economic satisfactions. At the same time, other forms of organization have been arising to satisfy needs, economic and otherwise, that were formerly obtainable only through family membership. In satisfying their needs outside the family unit, the members of families have also tended to acquire a variety of contrafamily sentiments, values, beliefs, and modes of conduct which have lessened the hold of the family still further. Over the course of many generations this gradual weaning away of institutional members has left only a few fragments and some ideological remnants of the old family system. A similar process was at work during the early Middle Ages when the feudal serf began to find his status unprofitable and distasteful and to see in escape to the growing towns the way to a better life. The feudal system was not seriously disturbed, however, until it came into conflict with a new system, the commercial town and guild, and was finally submerged by force.

The way that an institution may be destroyed is well illustrated by the decline of the guild system in competition with the “enterprise” system that arose during the eighteenth century. The guild form of work organization was, it will be recalled, incompatible with machine techniques of production; and a new system of work organization, the factory system, grew up around these new techniques. In competition with this

new, more efficient, and more enterprising type of work organization, the guilds were at a disadvantage, and they did not long survive.

The destruction of the guild system involved a form of group conflict; for the struggle between guild system and factory system was for a generation or two a struggle between the members of an institutional group, the guildsmen, and the members of a noninstitutional group, the factory owners and workers. In this instance the modes of conflict were largely economic and political. Often, however, conflict between one group representing an antiquated institutional system and another representing a new mode of organization involves the use of force, such as the labor rioting and other violence that ushered in the trade-union system. When entire classes of a population are involved in such a conflict, the accompanying violence takes on political coloration and becomes revolutionary.

Institutional Fragments.—Even a revolutionary breaking away from an old institution, such as that which occurred in Russia after 1917, does not, however, entirely dispose of the institution. Although the institution may in time disappear as a system, fragments of it persist in one form or another for centuries. Feudalism as a mode of social organization had ceased to exist in western Europe by the thirteenth century. Yet many of the feudal prerogatives of the lords persisted for centuries thereafter; and some still exist in mutilated form in the backward countries of central Europe, in Germany, and in England. In England, for example, the House of Lords is a relic from the time when there were feudal lords, even as the King is a sentimental survival from the time when English government was monarchical in form. In our own governmental system the Electoral College is almost as antiquated and is even less useful. It was developed at a time when the only means of communication and transportation between the newly freed colonies was by horseback and stagecoach. In a world of railroads, automobiles, airplanes, telegraph, telephone, and radio, the Electoral College has no conceivable political function.

When an isolated fragment is preserved long after the institutional context has disappeared, the fragment has, of course, entirely different functions from those it had in the institutional system. In some instances the institutional fragment becomes the basis for exploitative practices. Contemporary politicians appeal for votes and sympathy on the basis of antiquated filial sentiments; morticians make a racket out of the burial ceremonies that were once an integral part of the family system; the British government pays off some of its political obligations by awarding feudal titles; and would-be world conquerors obtain support by appealing to the fragmentary feudal sentiments and values of otherwise modern peoples.

In other instances the institutional fragment is retained for its artistic value. The modern urbanite's sentimental regard for the good old days of grandfather's farm and the nostalgic efforts of modern peoples everywhere to bring the family together at least on Christmas are social parallels to the whatnot, the candelabra, and the other material objects that have been preserved beyond their time; and they clutter up the organization of a society in much the same way that heirlooms clutter up homes. All modern societies have their attics filled with outworn institutional gimcracks; they even have their museums—such organizations as the Daughters of the American Revolution—for the collection and preservation of antiquated sentiments, values, and practices.

Social antiquarianism is justified in a variety of ways. In the main, social antiques, like the material ones, cater to individual pride and vanity. To be a D.A.R. is about equivalent to owning one of the many beds that Washington is supposed to have slept on. In some instances, however, old institutional fragments serve group ends, albeit very vague ones. The English, for example, evidence an especially strong affection for outdated ritual: the Guard is still changed at Buckingham Palace; the Lord Mayor of London still holds court, although London is ruled by the County Council and the Lord Mayor is not a lord and the court is not a court; the King holds audiences and signs decrees in ye olden manner, although he is not in fact a king. Such institutional fragments are no more than functionally meaningless rituals; they may, however, add something of "color and pageantry" to an otherwise drab and practical life.

PREINSTITUTIONAL MODES OF ORGANIZATION

In all societies at all times some experiments in human relationships are being conducted, and in a dynamic society such as our own many such experiments are constantly under way. Experimentation is in some instances a prelude to participation in an institutional unit. Thus among many primitives a boy and a girl come into marriage—an institutional arrangement—via premarital experimentation; and marriage is the sanctification of the particular experiment in boy-girl relationships that has proved satisfactory to both. Every institution, moreover, allows considerable latitude for individual experimentation within its framework. Finally, there is the experimentation that arises from the endeavor to supplement culturally determined forms of organization or provide substitutes for them. It is from this order of experimentation that new institutions in time arise, either new organizational ways of solving old problems or ways of solving such new problems as those imposed by technological changes, contacts with previously unknown peoples, etc.

Social experimentation in human relationships is a trial-and-error process, more complex than the process by which technical inventions and

discoveries are made, but otherwise much like it. For some centuries now the nations of the Western world have been experimenting with international organizations. Such experimentation has been impelled by the gradual economic integration of the peoples of the various nations, an integration for which none of the existing forms of organization—most certainly not the nations themselves—are adequate. So far, experimentation on this level has come to nothing, although after each successive demonstration of the need for an effective world organization, after each war, a new series of experiments is undertaken. Meanwhile, a thousand lesser but comparable problems of human relationships have arisen and, in time, been more or less effectively solved by the development of new forms of organization.

Organizations in the experimental stage fall into the category "pre-institutional"; for, as will be indicated shortly, those experiments that prove successful ordinarily begin to acquire institutional characteristics. The process of experimentation, however, takes two distinctly different forms—forced and voluntary. The Tennessee Valley Authority, now generally considered to have been a successful experiment in the organization of the water resources of an entire region, was forced—by government—upon the inhabitants of the Tennessee valley. The Metropolitan Life Insurance Company, on the other hand, also a successful experiment, came about in an entirely voluntary way.¹ No one entered into this experiment of a century ago except of his own volition.

Coercive Organization.—In any society there is always the possibility that a physically strong individual will violate the existing conventions and institutions and force relations of his own choosing upon others. Thus the poorly socialized and aggressive youth may push an elder off the walk rather than step aside and give that elder the right of way, as convention may require; or he may murder his elder brother and forcibly assume the status of family head rather than accept the subordinate role assigned to him by the family system. This individual sort of forcible violation of the established social organization, which we designate crime, seldom leads directly to new modes of social organization. When, however, groups, rather than individuals, engage in forcible domination of other groups, something new in the way of organization may be inaugurated. The slave system that evolved in the Americas began by force and to a degree was maintained by force; the strong European in need of cheap labor captured African primitives, transported them to America, and worked them as beasts. Presumably all slave systems have begun in some such way. Moreover, the process of conquest, in which

¹ For the history of this particular organization, see L. I. Dublin, *A Family of Thirty Million: The Story of the Metropolitan Life Insurance Company* (Metropolitan Life Insurance Company, New York, 1943).

members of one society subdue the members of another and forcibly impose new rules of conduct on them, is an experiment in human relations, which, if successful, leads to the establishment of a new form of social organization. The complex caste system of India, for example, is thought to have grown up as the result of a series of conquests by peoples from abroad.

The constant danger that strong individuals or minority groups within the population or aggressors from without may endeavor to force their will on the members of the society has led in most societies to the establishment of a protective organization, an institution of some sort that functions primarily to prevent the rise of antisocial force by the use of force. The organization protects the ordinary citizen from the thieving, bullying, and murdering members of the society and gives the group some defense against outside foes. In the more sacred types of societies, primitive and otherwise, the activities of government have seldom gone beyond these policing and military functions.¹

Under conditions of social change and consequent disequilibrium, when established institutions are losing their functional effectiveness, organized force has always been extended to facilitate experimentation in the working out of new modes of social organization. Usually this extension is accomplished through the existing system of government by the passing of laws which their proponents hope will either bolster up the disintegrating institutions or will serve as functionally effective substitutes for them.² Most such experiments fail, as the statute books of any contemporary society indicate; and the law is changed or falls into disuse. Out of a multitude of them, however, there do come, in modern societies as in those of the past, some few successes; and these successes then become established elements in the social organization.

In the short run, years or decades, forced organization may play a considerable part in the social life of a people. Force runs through and underlies a good deal of social organization, particularly that of modern peoples; and an increasing reliance upon force for organization is one aspect of secularization. The social innovator, tribal chief, prince, king, president, or congressman, can put his organizational inventions into practice more quickly by force than by any other means.

Force alone is, however, a flimsy basis for organization; and any organization so achieved is generally short-lived and ineffectual. Reactionary

¹For anthropological materials, see R. H. Lowie, *The Origin of the State* (Harcourt, New York, 1927).

For a case study of political organization in one primitive society, see S. F. Nadel, *A Black Byzantium: The Kingdom of Nupe in Nigeria* (Oxford University Press, New York, 1942).

²For a general analysis of the sociological approach to this process, see G. Gurvitch, *Sociology of Law* (Philosophical Library, New York, 1941).

political leaders have often endeavored to perpetuate outmoded institutional forms by fiat, backed up by police, courts, dungeons, and scaffolds. Visionaries have from time to time attempted to remodel a society by force; such is, in fact, the intent of all revolutionary movements. By force the Romans powered their galleys, and by highly and efficiently organized force the Soviet government more or less effectively destroyed the prerevolutionary land-usage system and imposed upon the Russians a new collective system. Nevertheless, forced organization is always tenuous. Unless the forced system functions with reasonable effectiveness, it will eventually be displaced, perhaps under the leadership of some upstart political leader; or it will break down through the apathy of those who are charged with its enforcement (occupying troops, for example, invariably go to seed in time; and a police force will ultimately sabotage a law that they and their fellow citizens deem unjust); or it will give way to a new experiment in forced organization.

Voluntary Organization.—The antithesis of forced organization is that which is voluntarily and deliberately brought about by those who expect to profit from participation in the organized activity. The individual members enter the relationship of their own "free will" in the expectation that they will obtain from it some particular satisfactions. Voluntary organization is inherently dynamic, for the members will soon withdraw and the group dissolve unless the organization provides, or promises soon to provide, the satisfactions that induced each member to join. Voluntary organization may be looked upon as an experiment in human relationships, a working out of organizational patterns. For, once effective patterns of organization have been worked out and have become established, organization ceases to be voluntary and becomes, as will be shown later, something else.

Interpersonal Relationships.—The most common type of voluntary organization is that which arises between two or more individuals on the basis of personal liking and similarity of interests. Within the membership of any kind of organization, family, neighborhood, business, club, etc., and between members of different units or different kinds of organizations there are always arising small, highly personal cliques. The relationships of the members of these cliques, usually designated interpersonal relationships, may be suggested by such terms as "companionship" and "friendship." Normally, interpersonal relationships are dynamic but are limited in scope. Organization, as such, is an inadvertent by-product of the trial-and-error endeavor of the participants to secure from one another satisfactions of an essentially congenial—i.e., recreational—character. Thus friends may arrange to meet at a given place and time, arrange to do this and that together, or engage in some form of organized sport or game. To the individual, participation in effective inter-

personal relationships is exceedingly important; and the study of these relationships, most especially of the consequences to individuals of inadequate relationships, has recently been subjected to detailed study.¹

The organizational implications of interpersonal relationships are limited by the fact that most such relationships are of very small scale and of limited scope and durability. Occasionally, what starts as a friendship relationship between a few individuals may grow into a more or less formal club; and the business partnerships of an earlier day were often, no doubt, an outgrowth of friendships. Moreover, many social agencies, modern and premodern, have catered to the individual need for interpersonal relationships.² Thus the tea shop of old China, the café of contemporary Europe, the crossroads store of rural America, and the bar of urban America are or have been places for the meeting of friends.

The most important implications of interpersonal relationships, however, are the tempering effects such relationships have on the more definitive and durable forms of organization. Within the membership of any kind of organization, institutional or otherwise, personal likes—and, conversely, dislikes—inevitably arise. And these personal factors often go a long way toward nullifying the institutional or other factors that would otherwise determine the relationships of father to son, of elder son to younger son, of king to subject, of master to slave, of employer to employee, etc.

Favoritism, growing out of the personal affection or liking of an organizational superior for one of his many inferiors, is apparently universal and is impossible to eliminate by any organizational means.³ Even the jailer will have his favorite prisoners and will give them, in return for

¹ See L. B. Tate, "The Role of Informal Activities in Community Life" (*Amer. Sociol. Rev.*, vol. 10, pp. 158-160, 1945).

Sociopsychological study of interpersonal relationships by means of more or less standardized measuring devices is now called sociometry. Research of this sort was originally initiated by J. L. Moreno (*Who Shall Survive?*, Nervous and Mental Diseases Publishing Company, Washington, D. C., 1934). For recent materials in this field see Supplementary Bibliography 11.

² For materials on the more enduring forms of organization that grow out of friendship associations and satisfy the need for such association, see F. A. Bushee, "Social Organization in a Small City" (*Amer. J. Sociol.*, vol. 51, pp. 217-226, 1945); N. P. Gist, *Secret Societies: A Cultural Study of Fraternalism in the United States* (University of Missouri Studies, Columbia, 1940); H. Goldhamer and N. P. Gist, "Social Clubs and Fraternal Societies" in *Development of Collective Enterprise* by S. Eldridge, et al. (University of Kansas Press, Lawrence, 1943); F. M. Thrasher, *The Gang* (University of Chicago Press, Chicago, 1936); A. K. Weinberg, "Aspects of the Prison's Social Structure" (*Amer. J. Sociol.*, vol. 47, pp. 717-726, 1942); and W. F. Whyte, "Corner Boys: A Study of Clique Behavior" (*Amer. J. Sociol.*, vol. 46, pp. 647-664, 1941), and *Street Corner Society* (University of Chicago Press, Chicago, 1943).

³ For a discussion of one specific case, see A. B. Hollingshead, "Ingroup Membership and Academic Selection" (*Amer. Sociol. Rev.*, vol. 3, pp. 826-833, 1938).

whatever it is that has endeared them to him, the choicest crusts of bread and the cleanest of the water. Favoritism increases as an organizational system disintegrates, and one of the symptoms of organizational deterioration is the growth of nepotism and other forms of reward in terms of personal preference and irrespective of merit. Thus a corrupt government is, among other things, one in which political patronage extends beyond the needs of vote getting to the paying off of friends with public funds and jobs simply for the sake of friendship.

Individual Enterprise Relationships.—A second, and in the modern world much more important, type of voluntary relationship is that which is brought about by the enterprise of two or more individuals who expect to profit from buying, selling, or exchanging goods or services. The peasant in need of shoes and with more food than is necessary to supply his current requirements may go to the village seeking a shoemaker with more shoes than food. The exchange that they effect is the working out of a problem in human relationships, and it and all the other exchanges effected between peasants and villagers and between the villagers themselves determine through time their over-all system of economic organization. The economic activities and relationships of the members of a family unit may be institutional; the slothful son and the sick elder, for example, may eat at the family table and give nothing in return. But those economic activities and relationships that operate through exchanges proceed on the basis of individual enterprise. They are more or less calculated; and since the interests and calculations of the individuals involved are various and variable, the organizational system that arises and is maintained through such exchanges is characteristically dynamic.

The rise, over the past two centuries, of the enterprise or "capitalistic" system of economic organization involved a rapid and marked extension of individual enterprise relationships to phases of life that had formerly been institutional (clothing, food, and shelter, for example, came to be purchased, rather than provided through the family) and the application of this sort of organization to the exploitation of the new techniques. As the guild gave way to the factory, for example, the worker ceased to be a member of an established institutional unit and became instead an economic free lance, a hireling who could work for an employer if he deemed it to his personal advantage to do so. The employer, too, proceeded on the basis of his own individual interests to buy raw materials or not, to hire workers or not, and to sell his finished goods or not.

The social advantage of organization on the basis of enterprise is that it gives the widest possible range to individual initiative. It is therefore far more appropriate to conditions of social change than is either institutional organization or forced organization. When through time and

success an enterprise organization comes to lack flexibility, it is normally pushed aside in competition with newer and still more dynamic organizations. Historically, most of the technological and other developments that have occurred during the past two centuries and many that occurred previously grew out of the organizational efforts of enterprising men—employers, workers, inventors, promoters, investors, etc.—each seeking through exchanges to get something that he wanted in return for something that he did not value so much.¹

Organization on the basis of individual enterprise is, however, even more fragile than forced organization. Its sensitivity to the profit possibilities in some new technique, which is its functional virtue, is paralleled by an equal, and at times greater, sensitivity to the possibilities of loss. As a consequence, a touch of adversity may interrupt the exchanges through which the organization exists and thus liquidate, for the moment, the entire organizational system. Fearing, for whatever reasons, that they would no longer be able to operate their factories at a profit, the owners might fire their workers, stop buying raw materials, and quit supplying goods to the market; their workers, without income, would then cease to buy food and other goods; without a market for their food and raw materials the farmers would be unable to keep up payments on their mortgages; and so on until perhaps the entire system would come to a halt. The maintenance of any large-scale and complex system of economic life through exchanges depends upon the day-to-day calculations of so many individuals that it cannot possibly run smoothly. It runs, rather, in fits and starts and is as a consequence subject to gross inefficiencies.

Joint Enterprise Relationships.—An alternative to the individual enterprise system is that in which a number of individuals jointly pool and coordinate their efforts in the effecting of an exchange or a series of exchanges with an individual or another group. Each individual enters into the relationship with the expectation that he will profit in one way or another from joining with others. A club, for example, may grow up because each of several individuals likes to play bridge, read books, discuss gardening, or what not, and decides that the inconvenience of meeting at stated times and places is more than offset by the satisfactions to be secured from joining the others at the appointed time and place. A business partnership, and in a more complex way a corporation, is a product of the belief of two or more individuals that the merging of

¹For the limited use of exchanges in primitive societies, see M. J. Herskovits, *The Economic Life of Primitive Peoples* (Knopf, New York, 1940).

The importance of exchange relations to the classical civilizations and in contemporary societies is discussed in M. Beard, *A History of the Business Man* (Macmillan, New York, 1938).

their money and abilities will yield each of them a greater return than either would receive were he to operate alone. A cooperative—one of the more prominent forms of organization on the basis of joint enterprise today—consists of a group of buyers or sellers who believe that they can each gain more if they pool whatever it is they have to sell or wish to buy and proceed in an organized, systematic manner to effect the transaction.¹

The theoretical advantages of organization on the basis of joint enterprise are many. If all the workers in a business establishment jointly demand a wage increase, their chances of securing the increase are considerably better than if each asks separately; hence the labor union. If two men, one skilled at making something and the other at selling, join forces, they may do much better than if each makes and sells; the gain here stems from a division of labor. If ten families combine resources in a joint housing project, each gains the advantage of increased bargaining power with contractors and, at the same time, the savings inherent in multiple production.

In practice, however, joint enterprise undertakings are more often failures than successes. One reason for this difficulty is that they are so often undertaken at the instigation of visionaries who believe that the impossible can be accomplished if only a number of people will put their backs and their minds to it. The Plymouth Colony is a classic example of people trying to do the impossible through joint enterprise. A more fundamental reason is that each participant in a joint enterprise undertaking normally expects more from it than he would from any other sort of organized endeavor, even from an individual transaction, and expects to secure whatever he does promptly and continuously. The man who will invest in a corporation and hope for the best and who will rent an apartment and put up with noisy neighbors and inadequate plumbing may nonetheless expect that the cooperative selling organization that he joins will pay dividends promptly and steadily and that the cooperative apartment house will be perfect in every detail. Joint enterprise undertakings tend, therefore, to disintegrate at the first signs of adversity. Moreover, it would seem next to impossible to secure any joint enterprise organization on a large scale. Unless the individual can feel that his own participation is vital and can see the importance to him as a member of the organization in doing what is required, he will tend to put his immediate individual interests before long-run and more col-

¹ For a general survey of the characteristics and history of consumer and other cooperative organizations, see E. Glöck, "Cooperation" (*Encycl. Soc. Sci.*, vol. 4, pp. 359-399). For analyses of various forms of voluntary group enterprise in contemporary America, see S. Eldridge, *et al.*, *Development of Collective Enterprise* (University of Kansas Press, Lawrence, 1943); and H. F. Infield, *Co-operative Communities at Work* (Dryden, New York, 1945).

lective interests. During the course of the war, for example, every nation found voluntary forms of rationing—a large-scale endeavor at joint enterprise organization—inadequate and soon resorted to forced regulation of consumption.

INSTITUTIONALIZATION

As has been indicated, the special virtue of all types of preinstitutional organization is adaptability. The preinstitutional group formulates its procedures as it goes along; and although it may fail through inadequate knowledge or skill, through the chicanery of individual members, or through the impossibility of the task that it has set for itself, it at least proceeds empirically rather than on the basis of cultural precepts. Under circumstances of social change, when established forms of organization are being outmoded, this advantage far outweighs the disadvantages in all experimentation, organizational or otherwise. The antiquated institutional system certainly does not work; the new coerced or voluntary system may possibly succeed in achieving its objectives.

All the more successful experimental organizations, however, tend in time to codify or solidify their organizational gains and thereby to acquire institutional attributes. This process, institutionalization, is the organizational parallel to the fixing in the cultural heritage of a new technique once it has demonstrated its superiority over the old one, thereby retarding further experimentation. Institutionalization is apparently one of the more universal social phenomena. Any particular experimental group, coerced or voluntary, may, of course, disband long before the relationships of its members have taken on the characteristics of a true institution. The drift of all organizations is, however, toward the institutional form.

Closing of Membership.—Ordinarily the first institutional characteristic to be acquired is exclusiveness. The nation, the largest unit of organization today, was initially loosely defined; and membership in a nation was a relatively casual affair, even as membership in the Chinese "nation" of today is vague and easily acquired. And although there was a time when any man willing and able to work was eligible for employment in business and industry and anyone with goods to buy or sell could operate in the market place, the "free" exchanges of the early nineteenth century have long since become more or less frozen.¹ The worker must belong to a union; and the employer and the buyer (and in some instances buyers, e.g., wholesale marketers) must be accredited or they cannot operate. The cooperative usually starts with an open membership; its

¹ One aspect of this organizational freezing of free markets is discussed in H. Levy, *Retail Trade Associations* (Oxford University Press, New York, 1945). The entire phenomenon is considered in A. R. Burns, *The Decline of Competition* (McGraw-Hill, New York, 1936).

membership quickly closes, however, if the organization meets with any success. And a friendship group that endures through time invariably closes its ranks to outsiders.

There are a number of methods by which groups become closed. Membership may become a matter of inheritance, as it did in some of the medieval guilds and has in the modern D.A.R.; of formal election, as it is in most clubs and many kinds of business enterprises; of informal election, as it is with local social elites; of ritualistic induction, as it is in Masonic and similar orders; of paying excessively high dues, as it is in the expensive rather than exclusive clubs and in certain trade-unions; or of special qualification, such as participation in military service during a war, completion of apprenticeship or a special course of study, or the passing of some sort of examination.

Whatever the method by which the group becomes closed, restriction of membership serves one or more of a number of functions. In many instances, the only purpose in closing the membership is to assure that the members will be more compatible than an unselected group of individuals would be. More often, however, restriction of membership grows out of the desire of the members to monopolize the satisfactions provided. With many clubs and other noneconomic groups, restriction of membership usually is a means of securing prestige. (Exclusiveness is the easy way for any group to gain prestige; and prestige is about all that many organizations have to offer.) The existence of such an exclusive scholarship organization as Phi Beta Kappa may possibly be an inducement to scholarly endeavor on the part of the undergraduate student; for the member, however, membership can have no other value than prestige.

Membership Hierarchy.—As the group becomes exclusive, distinctions in rank within the membership may appear. The members may come to be divided into classes, such as junior and senior members, associate and full members, and temporary and permanent members. Division of membership may at the outset represent functional differences in the roles of the various members; in time, however, the upper ranks often become a monopoly group within a monopoly group. Thus the senior members may more or less rest on their reputations and let their subordinates do the major share of the work. As a result, advancement in the ranks of the group may bring increasing rewards, either in prestige or in income, and diminishing responsibilities. A minor instance of this sort of thing is the common current practice of paying full professors of universities the higher academic salaries and burdening assistant professors with the heavier teaching loads. The prospect of ultimate advancement to high rank in an organization may possibly operate as an incentive to exceptional endeavor on the part of those in the lower ranks and thus

generally offset the limited contribution of those in the upper ranks. The consequences of stratification of organizational membership no doubt vary considerably from organization to organization.

Along with the development of a membership hierarchy a more or less elaborate system of offices and some procedure for the elevation of members to those offices frequently evolves. In such operating organizations as business corporations and trade-unions, the officers are usually leaders of the organization. In many instances, however, the offices are more or less honorific. (In the Masonic order, for example, rank determines ceremonial status and prestige within the group but entails little real leadership.) Elevation to office often involves seniority or favoritism or both. Even where promotion is nominally a matter of election by members, these factors tend to operate. In club, union, cooperative association, etc., there is often a general understanding that a term in such-and-such an office leads to a term in the next highest; or else at each election a limited slate of candidates, picked by the ruling faction within the organization largely on the basis of personal considerations, is presented. At any event, the rewards and responsibilities of office do not necessarily go to those who have displayed the greatest abilities in behalf of the organization as a whole.

Stabilization of Organizational Procedures.—Both restriction of membership and selection of leaders in terms of seniority or favoritism tend to induce organizational stability. Under restricted membership, those taken in will inevitably be much like those already in. Only a well-trained physician, for example, will be admitted to a medical society; only a good Republican can gain admittance to the more exclusive Republican clubs; only a firm believer will be inducted into the priesthood; only an adherent to age-old techniques of house construction can become a member of the local carpenters' union. Anyone who has "radical" ideas will fail to qualify; and should his radicalism become evident only after he is admitted, the member will be either brought into line with organizational policy and procedure or else expelled. In all time-tested organizations, members in good standing are members who support the established organizational ways.

The practice of elevating to positions of leadership those members who have been longest in the organization or, as the case may be, those who have won favor with the organizational elite, fosters organizational stability by assuring conservative leadership. Those who have stuck with the organization or who have endeared themselves to the elders of that organization have demonstrated their contentment with things as they are; either they have never had any zest for change, or they have outgrown it. Advancement by seniority also tends to drive out of an organization those young members who are exceptionally ambitious,

energetic, and ingenious. These individuals will seek in other fields of endeavor the opportunities to advance by merit. Favoritism similarly discourages individuals of real ability; and they either settle down in the organization to mediocrity, leave the organization for greener fields, or concentrate upon cultivating those superiors whose favor is the means to advancement.

An additional factor in the stabilization of most enduring organizations is the growth of beliefs and myths regarding the past, the present, and the future of the organization. These tend to provide justification for ritualized procedures and otherwise to assist in the perpetuation of the organizational *status quo*. Even in its brief life, the trade-union, for example, has evolved its history and theory; and in less than fifty years that theory has helped to convert trade-unionists from militant opportunists to fairly reliable and quite respectable public servants.

The Search for Security.—The tendency for all organizations to become rigid in the course of time has been thought by some to be a consequence of an inherent desire on the part of men to gain security. Certainly men, like the lower animals, by and large prefer the known to the unknown, the consistent to the variable, and what they have learned to do to what they must learn to do. Undoubtedly this quite general preference for the habitual is a factor in the institutionalization of organizations; but it is not the only factor, and perhaps not the primary one. The very mechanics of organization leads toward stability. Stability is, in a sense, inherent in organization; for organization is the ordering and coordinating of the joint activities of a number of individuals. This is just another way of saying that social organization is the means to social equilibrium; by organization and through organization men achieve whatever degree of social equilibrium that they have.

QUASI-INSTITUTIONAL FORMS OF ORGANIZATION

In contemporary societies the tendency for successful organizations to become institutionalized has resulted in a number of quasi-institutional forms. These fall into three major categories—professional, bureaucratic, and regimental. All three in one way or another display marked tendencies toward exclusiveness, toward stratification of membership, toward a rigid leadership hierarchy, and toward stability of organizational form and procedures. Each form of organization has, however, something of its own special attributes and functions. The organized relationships of medical men, for example, are of a quite different order from the organized relationships of government workers, unionized laborers, and soldiers.

Professional Organization.—Although the term “professional” is commonly used to distinguish one who earns his livelihood in a given occu-

pation from an amateur or a dilettante, the term "profession" is restricted to the organization of workers in one of those comparatively few occupations that provide services that require a high degree of technical or intellectual skill. A profession is at the outset a voluntary organization that forms in the endeavor to assure that only those workers in the field who have the requisite knowledge and skills will be recognized. As a consequence, membership in a profession is invariably contingent on the individual's fulfilling certain formal educational standards; and continued membership "in good standing" depends upon his technical proficiency and his adherence to the profession's code of conduct.

There is no need for bricklayers, farmhands, or other workers with tangibles to develop professional organizations. What each such worker does or fails to do can be readily ascertained by his employer. But the services of lawyers, doctors, teachers, scientists, and other presumably highly skilled workers are largely intangible (whether, for example, the physician did anything worth while for the patient is a matter of opinion); and the economic value of their services depends largely upon the public estimation of their occupation as such. The central concern of every professional organization is, therefore, to maintain, and if possible to raise, the prestige of the occupation in the eyes of society at large.¹

The economic value of the services of the members of a profession does not ordinarily diminish with increasing numbers. People can absorb almost unlimited scientific medical service; but whether they will demand little or much of it depends upon how they regard the medical profession as opposed to folk healers and pseudoscientific quacks. Professional organization therefore endeavors to control the character of the work in a given field but not to limit the number of workers. The profession sets high, and usually constantly rising, standards for admission to the group but accepts all applicants who can satisfy those requirements. By contrast, all the old-line labor unions try, as did the medieval guilds before them, to keep down the numbers who work in the occupation; apprenticeship and other requirements are simply a means to this end.

The member is restrained by the profession only to the extent deemed necessary for the protection of organizational prestige. He is bound by some standard of technical proficiency and some code of worker-to-worker and worker-to-employer relations (among other things, he must not let his profession down; *i.e.*, he must not publicly criticize another member of his profession); but beyond this he is free to compete with

¹ See E. L. Brown, *Lawyers and the Promotion of Justice* (Russell Sage, New York, 1938); A. M. Carr-Saunders and P. A. Wilson, *The Professions* (Oxford University Press, New York, 1933); O. Garceau, *The Political Life of the American Medical Association* (Harvard University Press, Cambridge, 1941); E. S. Robinson, *Law and the Lawyers* (Macmillan, New York, 1935); and L. Wilson, *The Academic Man* (Oxford University Press, New York, 1942).

his fellow workers in the open market. Any qualified doctor or lawyer may, if he chooses, open an office in any town, and he may charge whatever fee he judges desirable; and a teacher or a scientist who seeks a new position or a higher salary does so as an individual. Conversely, the professional organization does little to protect its individual members from the adversities of competition in the open market. It does not endeavor, as do the unions and most other worker organizations, to secure for its members the highest possible return for the lowest possible output. As a consequence, professional organization does not ordinarily discourage initiative in technical matters, however much it may tend to stabilize the relations of worker to worker and worker to employer.

Professionalization appeared first in western Europe in law. Medicine did not begin to develop much in the way of professional organization until the last century; since then the establishment and enforcement of ever higher technical standards and more rigorous codes of conduct have been major factors in bringing the growing body of biological knowledge to bear upon the prevention and cure of diseases. The professionalization of teaching and of scientific research has proceeded more slowly; and except for the public-school teachers who have of late begun to form unions, concern has been more with the development and diffusion of knowledge and skills than with securing a high economic return for the members of those occupational groups.

Bureaucracy.—Although the membership of a professional group is under more or less strict control, the professional worker does not do his work or earn his livelihood in the organization itself. He is either an entrepreneur or is employed by an entrepreneur. Where the work unit and the occupational organization are one and the same, as is the case, for example, with postal employees, another form of quasi-institutional organization, bureaucracy, tends to develop. Whereas professional organization stresses the maintenance of individual standards of occupational conduct, bureaucratic organization is directed mainly toward the maintenance of an established system of worker-to-worker relationships. The bureaucratic organization, a work unit of some sort, regulates and limits membership in the organization and also stabilizes the work procedures.

Bureaucracy is characteristic of all governmental agencies. During its establishment and for a short time thereafter, a new governmental agency may operate in a trial-and-error way in the effort to fulfill the functions assigned to it. But in time, usually a remarkably short time, it acquires out of the example of older agencies and its own experience a pattern of procedure and precedent that precludes much display of initiative on the part of individual members and that makes the entire organization

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stable and resistant to change.¹ A bureaucratic worker becomes a cog in the impersonal bureaucratic machine; and a bureaucratic executive becomes a follower of routine rather than an inaugurator of new programs. Every organizational misadventure, such as an action that results in adverse publicity for the agency, leads to the establishment of a new organizational safeguard; and that safeguard in turn becomes a precedent to be followed in all subsequent matters. Consequently, organizational procedures become steadily more complex, more time-consuming, and more involved. In an established bureaucratic organization, for example, everything must go through "proper channels," accumulating signatures as it goes. Each zig and zag in these proper channels was no doubt originally established for some functional reason. With the passage of time and change in circumstances, zigs and zags that no longer have any function accumulate, until the organization is preoccupied with procedure, red tape, and has little time for productive activities.

The bureaucratic type of organization is often exceedingly efficient in accomplishing a fixed organizational function, such as the distribution of mail. Its rigidity and organizational egocentricity tend, however, to make for gross inefficiency when work objectives are changed or when work conditions become dynamic. Under such circumstances, an established bureau usually deteriorates into a paper-work organization that functions mainly to preserve the organization itself. Every modern government is cluttered up with bureaus that have outlived their usefulness to society and have become routinized, self-maintaining agencies.

Bureaucracy is not limited solely to governmental agencies. Business organizations, most particularly the larger and more impersonal ones, also tend to acquire bureaucratic attributes in the course of time. There is, however, this general difference: whereas the inefficiencies of a governmental agency may go long unnoticed, the business organization that has become engrossed in antiquated organizational procedures will likely lose out in competition with other and less enervated organizations.

Regimentation.—Another form of quasi-institutional organization, regimentation, tends to develop in those occupations that demand the collective but dynamic adjustment of numbers of individuals to changing circumstances, such as those of warfare and natural catastrophe. Regimentation is characteristic of all military forces, of certain kinds of business enterprises and religious orders, and of the older labor unions. In this form of organization all initiative is allocated to and concentrated in

¹ See L. von Mises, *Bureaucracy* (Yale University Press, New Haven, 1945). For other facts and opinions on bureaucratic organization, see T. S. Harding, "Uncle Sam Unwhiskered" (*Amer. J. Sociol.*, vol. 50, pp. 305-306, 1945); J. D. Kingsley, *Representative Bureaucracy; An Interpretation of the British Civil Service* (Antioch Press, Yellow Springs, Ohio, 1944); H. J. Laski, "Bureaucracy" (*Encycl. Soc. Sci.*, vol. 3, pp. 70-73); and P. Selznick, "An Approach to a Theory of Bureaucracy" (*Amer. Sociol. Rev.*, vol. 8, pp. 47-54, 1943).

ing new markets, subjugating non-European peoples, and settling on new lands. Again there were no relevant precedents for establishing ownership, except perhaps those of the Roman conquerors. Initially the practice developed of ascribing nominal ownership of new lands to the king whose subjects had discovered them; and the king then assigned—as a favor or for a price—the rights of exploitation to individuals. This procedure led to some of the worst abuses of lands and of subject peoples in the history of the world—to interminable wars between European nations over colonial rights and to the ruthless exploitation of native peoples; and it laid the basis for most of the international problems that plague the peoples of the world today.

The Feudal Commune.—Such, then, have been the kinds of ownership problems occasioned by the continual redefinition of productive properties since the early Middle Ages. Under the feudal system productive property had consisted only of land (and this in very limited quantities), a few crude tools, and the feudal manor. Ownership was institutionally determined and as much a responsibility as a right. The feudal lord owned the properties, but only in the limited sense that the ancient patriarch owned the properties of his family; he managed them in institutionally designated ways, and he passed on his rights and his responsibilities to his son when he died. It was his right to be lord of the manor; but it was also his responsibility to protect his serfs from attack, to provide them with sustenance during times of siege, and to settle all interfeudal disputes and grievances. As landlord, guardian, judge, and leader, he no doubt worked for his inferiors as hard as they worked for him. His material return was a fixed proportion of the produce of each plot of ground worked by his serfs and their labor in the building and maintenance of the manorial establishment. The land and the manor were not his property in the present sense of the term “private property.” Custom required that he make the land available to his serfs at all times; he could not exclude them from it because of personal whim or calculated personal profit. Functionally, therefore, the feudal productive properties were held in common, and the lord and his serfs formed a small but socially complex economic commune.

Property Rights in the Middle Ages.—With the beginning of the decline of the feudal system during the eleventh century, the consequent rise in the importance of towns, the revival of the patriarchal family system, and the evolution of guild and municipal forms of organization, new modes of property ownership and management came into operation, overlapping and intermixing with the old. No one pattern of organized property usage was dominant, although for each form of productive property one system of property rights tended to prevail. The whole constituted a chaotic mixture of institutional practices (mainly those of

the feudal system, the medieval Church, and the patriarchal family) and various voluntary organizational arrangements, which either changed rapidly through time or else became stabilized and quasi-institutional. All the various ways that productive properties were held and managed during the Middle Ages cannot be described here, but something of the confusion and contradiction can be indicated. It was out of this period of confusion and contradiction in property rights that the present forms of property ownership ultimately evolved.

Agricultural lands, which declined in relative importance as other forms of productive properties developed, ceased in time to be held communally. The manorial estates gradually became the private possessions of the lords, who hired their former serfs on a wage or share basis and could therefore fire them at will. This development is the historical basis for the landlord-peasant system that still obtains in many parts of Europe and that was put into operation in some of the lands conquered by Europeans, especially those taken over by the Spanish. Meanwhile a second method of landownership was evolving. Many of the serfs who were freed or escaped took to cultivating the unclaimed lands between the boundaries of the manors; and they gradually came to acquire traditional and then legal rights to these lands. Their holdings were usually small, no larger than a family could work under the techniques then in use; and ownership and operation were therefore vested in the same person, the peasant proprietor. The peasant-proprietor system of land usage has been developed furthest in what is now France, although parallels to it, such as the family farm of contemporary America, exist elsewhere.

In the growing towns a variety of ownership patterns developed. The individual townsman usually owned his house and the land on which it was built, ownership implying many more privileges and far fewer responsibilities than those of the homeowner of today. Certain areas within the town, such as the "common" (the predecessor of the modern public park) on which livestock were pastured, were held jointly. And later many of the towns took over and operated as municipal enterprises such establishments as grain mills, textile factories, and even brothels. The most valued "property" of all, however, was a nonproductive property, the monopoly rights over a given craft production or form of trade. This was generally owned neither privately nor publicly but by a guild, which from the point of view of property ownership was a small, closed commune.

Interwoven with these modes of property ownership were the various systems of property ownership and control exercised by the medieval Church, by the princes and kings with whom the Church was engaged in a struggle for power, and by the Jewish financiers. The Church had

constantly expanded its economic activities; and by the fifteenth century it had become a vast economic organization and the holder of an immense number of properties, most of which were, however, unproductive. The Church had acquired many feudal estates by gift, by trickery, and by military conquest. It had also developed a number of taxation systems; it charged fees for religious services, and it monopolized the production and sale of religious goods, such as candles and rosaries. From these sources the Church derived a very considerable revenue, but the uses to which it put this revenue were such as to hinder rather than stimulate the economic life of Europe. A considerable proportion of Church income went into its cathedrals. Much went to maintain the Church hierarchy in comparative luxury. (Church leaders were assiduous collectors of such liquid wealth as gold, silver, and jewels.) What income was left over was often lent, at exceedingly high rates of interest, to princes and other secular leaders for the financing of military and other unproductive ventures.

The growth of specialized production and of trade was increasing the importance of money—gold, silver, and tokens thereof—as a medium of exchange. Although money is not a property, it is a symbol of property; and the exchanges that are effected through money have a profound influence on the uses to which productive properties are put and hence upon the real wealth—goods and services—of a society. As an economic organization the Church through its money wealth tended to divert labor and materials into channels that did not add to the real wealth of the peoples of western Europe. For one thing, the Church prohibited lay Christians from lending money at interest and thereby endeavored to secure a monopoly over all large financial transactions. To some extent it succeeded and became for a time the principal banking agency of medieval society. But the Church used its money power as a means of extending its political power and was consequently more inclined to finance military projects than commercial ventures. Moreover, the exceedingly high rates of interest that it charged were too high in many instances to make private commercial enterprises profitable.

As the need for private financing grew, Jewish moneylenders, who were not, of course, affected by the Church ban on usury, began to cut in on the Church's monopoly. Jewish silversmiths and goldsmiths gradually became financial agents; and out of this beginning the system of private banking, as contrasted to Church banking, developed. The Jewish moneylenders favored business enterprises against political enterprises; thus they encouraged the expansion of the economic life of western Europe, whereas the Church discouraged it. And in time the Jewish moneylenders joined forces with the secular authorities in their war against the Church. The importance of the Jewish moneylenders to the

economic life of the latter Middle Ages cannot be overestimated; the Spanish eviction of the Jews, for example, seems to have contributed a good deal to the subsequent stagnation of Spanish economic life.¹

Mercantilism.—It cannot be said that any single, unified, institutional system of property ownership and management has yet emerged from the latter Middle Ages. But in the centuries since, a number of organizational motifs have appeared, much as short skirts and long skirts have been the motifs for women's dresses.

The first semblance of a trend in property control began to appear during the sixteenth century and was an economic reflection of the growing unification of European peoples under strong monarchical governments. The Church was more or less internationalistic, and its economic activities extended over all the people of Europe. The secular rulers, on the other hand, were interested primarily in internal unification, and this came of necessity to mean economic as well as political integration. First in England and then on the Continent, the rights of local princes, municipalities, and private landowners to levy tolls on transport down rivers and over roads were absorbed by the kings. The transfer of this and other forms of tax power from local to central authority was justified in terms of the economic well-being of the realm; and from such moderate beginnings there evolved over the next few centuries the mercantilistic ideology.²

The mercantilists held that the welfare of any people was directly dependent upon the liquid wealth—gold, silver, and jewels—within the country, most particularly within the king's treasury. With such wealth the king could hire armies to defend his realm and perhaps expand it (at this time military forces were usually composed of mercenaries); he could outfit expeditions to the New World; and he could purchase from other monarchs such productive properties as he was unable to wrest from them by force. The nation was, in effect, looked upon by the mercantilists much as modern men look upon a business corporation; it was regarded as an economic organization engaged in the making of a money profit.

The way to increase profits was thought to be by such political regulation of the economic activities of the people as would encourage the importing of bullion—i.e., by tariff duties on exports, by aid to domestic agriculture (so that gold would not have to be used to purchase food

¹ See A. A. Neuman, *The Jews in Spain: Their Social, Political and Cultural Life during the Middle Ages* (2 vols., Jewish Publications Society Press, Philadelphia, 1942).

² See J. W. Horrocks, *A Short History of Mercantilism* (T. Fisher Unwin, London, 1925).

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from abroad), by support of producers and traders engaged in export, and by a placing of the burden of taxation upon domestic consumers. All these mercantilistic endeavors modified preexisting property rights in one way or another. The Church, for example, was largely prevented by such regulations from exporting liquid wealth to Rome; the landed gentry were in many instances forced to convert their hunting fields to grain in order to survive economically; and all forms of property and economic endeavor became subject to the king's tax, for the "benefit of the nation." The over-all consequence of mercantilistic policy was an intense scramble among European nations for foreign markets, a struggle on the part of each to become economically self-sufficient (reversing the long-time trend toward productive specialization and trade), and a decline in the real wealth and hence the economic welfare of the peoples of western Europe.

For upward of two centuries, the mercantilistic idea that gold is wealth dominated political leaders in Europe. Even now, nearly two centuries after the rise of contrary ideologies and after marked changes in the economic organization of Western societies, mercantilistic doctrine and practice persists in fragmentary form. France, for example, has consistently adhered to a policy of attempting to achieve economic self-sufficiency, justifying the endeavor on military grounds. That this policy has kept the people of France relatively poor without, however, providing them with any protection from military attack does not seem to have lessened the faith of French politicians in the value of prohibitively high tariffs, of a peasant land-tillage system, and of diverse but limited industrial development. The American colonists revolted from British rule because the mercantilistic policy made the colonies an economic vassal of England, preventing them from developing industries and otherwise improving their economic welfare. Nevertheless, the American people are today committed to such mercantilistic practices as hoarding gold; and they have now acquired, at considerable material sacrifice, a major portion of the world's gold supply.

The Doctrine of Laissez Faire.—The changes in the techniques of production that culminated in the development of the factory system began to occur toward the close of the eighteenth century. At that time, however, the ownership and use of productive properties were so minutely regulated by mercantilistic law, by guild tradition, by family custom, by organized religion, both Catholic and Protestant, and by remnants of feudal practices that it was next to impossible to exploit the new techniques without violating some law, some tradition, some custom, or some institutionally sanctioned practice. A revolution in the methods of property ownership and management was therefore in order. Only through

such a revolution could the new technologies, themselves a response to the underlying economic disequilibriums of the period, be put to work.

The revolution opened, as revolutions usually do, with a verbal barrage. The idea that the wealth of a nation lies in its accumulation of gold and silver was challenged, first by the French physiocrats (about 1760) and later by the Englishman Adam Smith, whose *Wealth of Nations* (1776) played much the same role during the nineteenth century that Marx's *Das Kapital* has played during this century. According to Smith's doctrine, the wealth of a nation is to be measured in terms of the productive capacity of the people of the nation, rather than in terms of the bullion in the king's treasury. In time this premise made sense even to kings; for events—such as the failure of England to put down the American Revolution with hired troops—had demonstrated that military success could no longer be purchased with gold but now depended on the ability of a nation to supply its fighting force with guns, horses, ships, and other equipments of semimechanical warfare. Moreover, the new doctrine was in line with a growing political concern for the maintenance of the monarchical form of government. The impoverishment of the masses under mercantilistic controls was occasioning in France and to a lesser extent in England the rumblings of political rebellion. "Democracy" was the new catchword, and monarchs were becoming more interested in maintaining their thrones than in expanding their realms. The kings of Europe therefore tended to lend a respectful ear to the proponents of a doctrine that promised an increase in the economic well-being of the people.

To secure maximum production of useful goods, the new doctrine contended, it was necessary to free individual initiative from the restraints of ancient customs regarding property ownership and usage, from ill-advised legal regulations on trade and other economic activities, and from the monopolistic controls that were still being exercised by the guilds. In the pursuit of his interest in profits, the unrestrained individual would apply himself to the exploitation of the newest techniques of production, he would endeavor to devise ever-more-efficient productive techniques, and he would thereby unintentionally but nonetheless effectively increase the wealth of the entire nation. The cure for the conflicting and obstructing systems of property rights and usages was, in other words, no system at all.

The eighteenth-century philosophers had great faith in inherent laws, a reflection of the growth of the physical and biological sciences; and they believed that all social evils are a consequence of man's violation not of God's will, as the churchmen contended, but of "laws" of social life. Let those laws run free, and all would be well with human affairs. To the French physiocrats and to Smith and his disciples this meant that there are laws inherent in the economic relationships of men which,

when freed from organized interference, such as political restraints, would inevitably assure the greatest possible production of material goods and services. They concluded, then, that government should remove all legal restrictions on trade, on production, on the exchange of wealth, and on the accumulation of property and should remove its sanction from the restrictions imposed by the guilds and other nongovernmental organizations.

Capitalism.—Although this doctrine of freedom of economic enterprise—*laissez faire*—was adopted and acted upon wholeheartedly only in Britain, it became the dominant motif in all Western countries during the nineteenth century.¹ Upon this ideological base and in response to underlying technological and economic factors, a comparatively new system of property ownership and management, “capitalism,” developed. In this new system the ownership of productive properties, with some notable exceptions, was both individualized and divested of all social responsibility; *i.e.*, property became private and was freed from all obligations to state, church, family, and other established organizations. The rise of factory production had a good deal to do with the evolution of this new property concept, for there were no institutional or legal precedents in regard to ownership and operation of factories. The owners of factory properties were thus at the outset free to do with them as they pleased; and in adherence to the new doctrine of *laissez faire*, governments tended to support them in this “right.” Everything concerned with the use of factories was placed on a voluntary basis: the owner was under no obligation to produce goods if he did not wish to do so or if he did not believe that he could make a profit; the worker was bound neither by custom nor law to his factory work and thus was free to seek that employer who would pay him the highest wage; the factory owner was free to buy his raw materials where he could get them most cheaply and to sell his finished goods in the most profitable market.

The guild system of production was still in operation when the new system of private enterprise developed around the factory method of production. But the guild system, with its restricted craft fabrication and regulated distribution, could not long compete with factory producers who used machine techniques and paid laborers no more than what was just necessary to secure their services. Gradually, therefore, the guilds disappeared, and with them went the guild system of regulated production and trade.

Under the capitalistic system the one obligation of the property owner was that he fulfill all contracts that he voluntarily entered into. Whatever else he might do, the factory owner had to pay the promised wage,

¹ See F. L. Nussbaum, *A History of the Economic Institutions of Modern Europe* (Crofts, New York, 1933).

to supply the promised goods, and to take the ordered raw materials. And likewise the laborer had to work out his day; the merchant had to pay for the goods he had ordered; and the supplier of raw materials had to provide the wool or other raw material that he had agreed to sell to the processor. The guaranteeing of economic contracts was essential to the operation of the new system. For the capitalistic system operated entirely on faith, the faith of each participating individual that what he did today was conducive to his gaining a profit tomorrow; and each individual calculation was predicated on the knowledge that raw materials would be supplied, as agreed, that wages would be paid, as arranged, and that finished goods would be accepted and paid for, as contracted for. The inviolability of contracts was not a new concept to Western peoples; but theretofore contracts had generally been entered into by groups—by families, manorial estates, guilds, etc.—the honor of the group being at stake in any such contract. In the new system contractual obligation, like property ownership, was an individual matter.

The codification and enforcement of the customs that grew up regarding business contracts soon became one of the major functions of the state; and a maze of laws developed in support of property rights and the fulfillment of contracts concerning property. Lawyers then became as vital as engineers to the conduct of a business enterprise. The writing and interpreting of contracts became a thriving occupation; and lawyers became professionally organized and developed a vested interest in the maintenance of state-supported private property rights and obligations. To this day, lawyers are inclined to look upon the established system of property rights as something that is inherent in the very nature of society and necessary for the perpetuation of social life.

Corporate Organization.—The growth of legal enforcement of contractual obligations and the increasing complexity of productive techniques tended in the course of time to discourage individual enterprise. Individuals, however wealthy, were disinclined to undertake the high risks of experimenting with a new technique (such, for example, as the railroad train) that required an enormous outlay of capital when, should the venture fail, they would be held personally responsible for all the contracts that they had entered into. By the opening of the nineteenth century there was, as a consequence, a dearth of "venture" capital; new inventions went untried, new markets were not exploited, etc. Pessimists predicted the end of economic expansion. Shortly, however, the introduction of a new mode of property ownership, corporate organization, released a new flood of venture capital and made economically feasible the wildest sort of economic speculations.¹

¹ Corporate organization takes many legal forms. Roman law recognized corporate entities as distinct from the individuals who composed them; crown grants

In essence a corporation is a sharing of risks and a limiting of contractual obligations. The individual member of such a voluntary organization risks only the money that he has put into the corporation. From hundreds or thousands of such individual contributions a capital pool is formed; and the corporate managers risk this capital, not their personal fortunes, in a new venture. The corporation, as a legal "person," is liable in case of financial failure only to the extent of its original capitalization.

The corporate system of ownership undoubtedly encouraged the fullest possible exploitation of industrial techniques and the continual search for new techniques. The system also led to an unprecedented consolidation of economic power and the decline of competition between businessmen, which the laissez-faire theorists had considered an essential element of capitalism.¹ As a matter of fact, the corporate form of organization saved capitalism for the short run, only to help to kill it in the long run.

Under the corporate system one man could gain control of millions of dollars; and by the consolidation of corporations, he could build a financial empire that was more productive, and hence in the long run more powerful, than any ever ruled over by a king. Consolidation of corporations was encouraged by a number of economic considerations. In those industries that used a good deal of power machinery, for example, the unit cost of production declined as the number of units produced rose. Thus the bigger plant could undersell the smaller one. More important, consolidation was a means to the elimination of competitors. And with competitors eliminated, either by being absorbed into the organization or run into bankruptcy by being undersold, the consolidated corporation could command a monopoly price for its goods or services. Throughout the latter half of the nineteenth century the trend was toward ever-larger corporations and the acquiring of monopolies over the production of given products.

The laissez-faire doctrine assumes that competition is both the stimulus of power to groups—corporations such as the British East India Company—were common during the latter Middle Ages and onward. The organizational invention that saved capitalism early in the nineteenth century grew out of a combination of the business partnership and the concept of the corporation. Partnerships first became limited in liability; then limited partnerships became multiple, *i.e.*, many persons entered into a single limited partnership; finally the organization was legally abstracted from the persons who formed it to the end that what a person did as a member of a corporation was entirely dissociated from what he did as a private individual.

For further discussion, see A. A. Berle, Jr., and G. C. Means, "Corporation" (*Encycl. Soc. Sci.*, vol. 4, pp. 414-423); and A. R. Burns, "Joint Stock Company" (*Encycl. Soc. Sci.*, vol. 8, pp. 411-413).

¹ See E. M. Queeny, *The Spirit of Enterprise* (Scribner, New York, 1943); P. F. Drucker, *Concept of the Corporation* (Harper, New York, 1946); and D. Lynch, *The Concentration of Economic Power* (Columbia University Press, New York, 1946).

to enterprise and the check to socially undesirable use of private property. Under competitive conditions the seeker after profit must, it is believed, produce social utilities. It has long since been demonstrated, however, that this is not necessarily so. The seller of shoddy merchandise may reap high profits while the honest merchant goes bankrupt; the producer of some intrinsically worthless gimcrack (patent medicine, for example) may make a fortune while the producer of a useful article goes broke; the producer of an old-fashioned article may risk nothing yet grow rich while the adventuresome capitalist may lose his fortune in trying to build a better mousetrap. Nevertheless, during the early phases of the industrial revolution competition did tend to keep productive properties producing and to keep their owners alert for more efficient production methods.

The growth of corporate monopoly ("trusts," they were called here in America), which became pronounced during the latter half of the last century, involved a shift in the attention of business leaders from attempts to increase production and improve productive processes toward the financial skulduggery by which monopolistic practices could be made effective. Once a monopoly was established, all or almost all incentive for technological or other experimentation disappeared. As more and more aspects of the economic life of Western peoples were brought under corporate organization and as such organizations acquired monopolistic control over their special fields, the capitalistic system threatened to become as rigid as the guild system that it had replaced.

The laissez-faire ideologists often claim that the free-enterprise system has not failed, that, rather, it has simply never been given a chance. A more realistic view is that the voluntary type of economic organization (the core of the original system of capitalism), like every other mode of social organization, tends in time to develop institutional attributes. Free enterprise gradually grows unfree, if not as a consequence of external restraints, then because of the inherent tendency of established organizations to become monopolistic and bureaucratic.

Contracapitalistic Organization.—During the latter half of the nineteenth century, when the capitalistic system was here and there beginning to lose the dynamic quality that had been its primary virtue, two contracapitalistic ideologies gained wide acceptance. Both had roots deep in the past; but both were presented as original plans for the radical improvement of social life. The one, appealing mainly to the intellectuals, was Marxian socialism, which became the center of a cult of political revolutionaries and, with the Russian Revolution, was elevated to the status of a quasireligious ideology. The other, less definitive but with wider appeal, is usually labeled nineteenth-century liberalism. Liberalism was more a sentiment than a doctrine; it held that the welfare of the mass of the people is more important than the power and glory of the

state. In terms of this new sentiment it was quite evident that capitalism was not working any too well. Although, so the argument ran, capitalism had brought a great increase in social productivity, the mass of the people were still impoverished; they lived from hand to mouth, and all too frequently there was nothing in the hand. Clearly, therefore, capitalism was profitable only to the capitalists.

Actually, the major part of the great increase in social productivity under capitalism had been absorbed by increasing population numbers and by a rise in the general standard of living of the masses. In comparison with the lot of the masses in times past, that of nineteenth-century workers was much improved. The liberals, however, used as their measuring stick what the standard of living could be under perfectly organized exploitation of industrial technology; and the actual standard was, of course, far below this ideal.

The methods proposed for attaining this ideal standard of living were various and often contradictory. Out of countless proposals and almost as many actual experiments in raising the standard of living of the masses have come two fairly clear trends in organizational development: trade-unionism and state socialism. Union organization has been an attempt to achieve for workers something of the monopoly over the supply of labor that the corporate organization gives to the employers over the demand for labor. Functionally, therefore, union organization is a partner with corporate organization in tempering the operation of free enterprise. Together they have done much to remove both the freedom and the enterprise from the capitalistic system; nevertheless, both give lip service to capitalistic ideology and make no frontal attacks on private property rights.

Socialism, on the other hand, is an avowedly anticapitalistic program; and it calls for a synthesis of political and economic organization.¹ In laissez-faire theory and practice economic matters were isolated from all other aspects of social life; thus politics and business were treated as separate realms. This severance of the economic from the political was carried so far in English thought and action that during the Crimean War a Russian war loan was floated through the London stock exchange. As businessmen, it was argued, we British citizens are without nationality; that the money we pay for Russian bonds is spent to purchase munitions with which to kill our sons is merely an oddity of social life. As Englishmen, we may regret it; but as men of business, we cannot fail to take advantage of this opportunity to make a profit.

The socialists, not all of whom have been Marxian, have challenged the validity of this separation of man into the economic and the non-

¹For a summary of the vast literature on socialism, see O. Jászi, "Socialism" (*Encycl. Soc. Sci.*, vol. 14, pp. 188-212).

economic and in various ways have sought to subordinate economic activities to social ends. Some have been content with political regulation of business enterprise, as is now the common practice with railroads and other public utilities. The more radical of the socialists, however, have demanded that the state cease to be a supporter of private property rights and, for the benefit of the members of society, become the owner and operator of all productive properties. The achievement of this goal would necessarily mean an elaboration of the state as a mode of social organization and an extension of its functions beyond all historical precedent.

THE STATE

Under the feudal system no distinction existed between the state and the basic economic unit. The lord was not only the nominal owner and actual manager of the manorial properties, he was also the keeper of the peace within his little realm and its defender from external attack. Since the relations of the members of the feudal unit were highly institutionalized, the governing functions of the lord were presumably limited to the settling of disputes between serfs, the punishing of individuals for infractions of customs, and the guiding of the group during times of crisis, such as famine or attack.

With the decline of the feudal system and the rise of a variety of other modes of organization (town, guild, trade, etc.), new problems of governing arose. Someone had to assure the security of the trade routes, keep the peace within the towns, defend the towns from military attack, etc. In time overlords arose to provide this protection on a regional basis; and as the economic integration of European peoples progressed, there came about a gradual consolidation of regional principalities into larger political units, kingdoms.

Meanwhile various new forms of local political organization were evolving. The kings of the latter Middle Ages, like the overlords who preceded them, were concerned mainly with maintaining the peace within the realm and waging war—defensively or offensively—with other kings. Most other matters, such as the regulation of the economic life of the towns, the protection of the individual from violence, etc., were left largely to the locality. The towns were subject to the king's law, but they retained all powers not specifically absorbed by the king. Villages and rural communities in time developed modes of local political organization comparable to those of the towns. In the end there was, therefore, a dualism in the European state system: affairs between the kingdom and other kingdoms and between various political units within the kingdom became the province of the king, while local matters remained the province of the people of the locality. In passing, it might be observed that some conflict always existed between local and national government

and that the drive for and the pattern of representative government that finally emerged came from local forms of political organization.

Extension of Police Powers.—By the fifteenth century the monarchical form of government had become fairly well institutionalized. Although the process of political consolidation continued for some centuries after this, particularly in Britain, Italy, and Germany, the basic form of the state was by that time fixed in Western culture; and it did not change until well into the modern period. The functions of the state also had become highly traditionalized. They consisted almost exclusively of the protecting of towns, villages, and travelers on the king's highways from organized banditry and the protecting of the realm as a whole from attack by the forces of other monarchs. They did not extend to any significant degree into the family or the economic life of the citizens. The king could levy and endeavor to collect taxes for the maintenance of his magistrates and soldiery; and he provided, at a considerable price, the monetary medium. But the state was not held responsible for the economic welfare of the people; nor, indeed, was it permitted to meddle in their economic affairs.

In the main, then, the functions of the medieval and early modern European state were the provision of protection, the use of force to prevent the rise of force. This function is usually described as constituting the police powers of the state, and the idea that policing is the proper sphere of the state is so deeply embedded in Western culture that almost every subsequent addition to state functions has been justified in terms of police powers. Thus the close regulation by the state of economic life, which developed under mercantilistic theory during the seventeenth and eighteenth centuries, was justified on the grounds that such regulation was necessary for the physical safety of the realm.

Mercantilistic regulation of the economic life of the people coincided with a considerable extension of secular law into family affairs and other previously private phases of social life. Throughout the Middle Ages the Church had been the enforcer—through Church courts, prisons, and torture chambers—of family morality and the Christian code of conduct. As the state won out in its struggle with the Church, the state took unto itself many of the control functions that the Church had formerly exercised. Family law, for example, became codified as state law, moral codes became embodied in law and enforced by the king's magistrates, etc. In this way the state extended its functions to the maintenance by law of such nonpolitical forms of organization as the family, the guild, and in time the Church itself or its Protestant substitutes. And these extensions of the function of the state, like the mercantilistic regulations of economic life, were usually justified as necessary for the preservation of the peace.

Representative Government.—Not until well toward the end of the eighteenth century, when the dislocations that accompanied the beginnings of the industrial revolution provoked the rumblings of political rebellion in England, did the idea of using the state for purposes of promoting social welfare gain many adherents. Even then the major concern of political radicals was to free the people from the "oppressive and deleterious" regulations that had grown up within the state. These political radicals believed that government, far from being a force for good, was inherently bad and should therefore be kept at a minimum. Police and military forces were necessary for purposes of security; but the state should be restrained from extending its powers, and the form of the state should be such that it could not be perverted to the interests of any individual or minority within the nation. From this view came the many efforts to design and to bring into being a system of government that would above all else assure the individual citizen freedom—*i.e.*, a state that would protect the citizen not alone from brigands and foreign armies but also from the state itself. Out of these efforts evolved the various forms of representative government that were the end products of the late eighteenth- and early nineteenth-century revolutions.

Minimal government was, of course, in keeping with the new ideology of capitalism. In *laissez-faire* theory, it will be recalled, man-made law was deemed unnecessary in the control of economic life. But in practice, as has been shown, legal enforcement of contractual obligations soon became necessary; and this function was taken on by the state. The state did not in this way regulate economic life; rather, it lent support to the voluntary transactions and organizations through which economic activities were carried on under *laissez faire*. In contemporary terms, the state was to this extent a functionary of business; legislators and other governmental officials soon came to represent business interests instead of the landed gentry (the descendants of the feudal lords), the royal house, the highly institutionalized guilds, and the other traditional groups that had existed under monarchy. In this role, governmental personnel were constantly on the side of the owners of productive properties, particularly industrial properties; and governmental powers were used to prevent peasant and labor uprisings and other mass endeavors that could be interpreted as jeopardizing the "rights" of property owners.

Even today representative governments tend to favor business interests above religious, educational, public welfare, and other interests, and to favor large business enterprises more than small ones. Although this tendency is in part a consequence of the fact that money power buys political power, it is largely a consequence of the persistence of capitalistic ideology in all Western countries. Other economic ideologies have

been grafted onto that of *laissez faire*; they have not, however, displaced it.

Social Welfare Functions.—Even during the early nineteenth century, when freedom from political regulation of economic life was a sacred tenet of political philosophy, the state continued to absorb the functions formerly fulfilled by other agencies. And it did so at a constantly increasing rate, for the industrialization of productive processes was by then shattering many old forms of social organization. As has been indicated earlier in this chapter, the family system was losing its functional effectiveness; informal community organization was beginning to break down; cities were growing at an accelerated rate; and new technologies, particularly those in the fields of communication and transportation, were posing new problems of control. A great many circumstances were arising that were either new to human experience or of unprecedented importance. Who should provide for the deserted wife when there was no longer any family home to which she could return? Who should care for the foundlings abandoned by impoverished or indifferent parents? How could congested cities be protected from recurrent and disastrous fires? How “free” was the new medium of communication, the newspaper, to be? Who was to say when and where the new mode of transportation, the railroad, was to run?

In many instances, as has been shown, such problems were initially solved by the development of voluntary organizations. Many of these organizations failed of their purpose, possibly because of the inherent characteristics of voluntary organization.¹ Others, especially the educational and charitable organizations, grew so large and so much burdened with responsibilities that they could not be maintained on a voluntary basis. And in some cases the provision of social services by voluntary

¹ The protection of towns and cities from fire, for example, was initially placed on a voluntary basis. In villages and very small towns the voluntary fire company was perhaps fairly adequate; every member of the company was a potential loser through fire and had a personal incentive for checking any fire that broke out. In the cities, however, the voluntary fire companies were of little value. The members, most of whom were not owners of property subject to fire, tended to look upon fire fighting as a sporting affair. Moreover, the private insurance companies often rewarded the voluntary fire companies for protecting insured properties—which were marked to distinguish them from the uninsured—with the result that there was much competition between fire companies for the honor, and the reward, of saving an insured building. In this competition, rival companies often fought each other rather than fires, and uninsured properties were invariably ignored in the endeavor to save those which were insured; and the voluntary fire companies sometimes started fires so that they could secure the rewards paid by insurance companies.

For a detailed historical study of the taking over by the state of a variety of activities initially of a voluntary order, see C. Reith, *The Police Idea: Its History and Evolution in England in the Eighteenth Century and After* (Oxford University Press, New York, 1938).

organizations proved inimical to public interests. In time, therefore, many initially voluntary organizations were taken over by the state, as the only agency capable of fulfilling their functions in a reasonably competent manner. In Europe, especially in France and Germany, this absorption by the state of new powers was generally justified in terms of the old idea of police power. In England and America and some other countries there evolved the idea that the state should be, as it was in fact becoming, a welfare agency, responsible not only for the physical security of the citizen but also for his economic and psychological well-being.¹ And once this concept of the role of government had been accepted, there was no end to the things that the state could enter into and that the citizen might demand from his government.

The Socialization of Property.—The extension of the state into welfare activities has generally received the tacit support of business interests, and at times their active assistance. For one thing, business leaders gradually came to the view that, if orphans and elders and other incompetents had to be provided for, it was more economical, hence better, to do it by public than by private philanthropy. For another thing, the impossibility of operating fire and other protective agencies on a voluntary or commercial basis gradually became apparent. And, more recently, businessmen began to see in many governmental welfare activities a method whereby private business was protected from adverse action by the have-nots. The current vogue in America for social security legislation—old-age pensions, unemployment insurance, etc.—is, for example, generally supported by business interests. For American businessmen have at last come to believe, as British industrialists came to believe a century ago, that any large body of impoverished and discontented citizens is a threat to the economic *status quo* and that a legislative sop in time may well save them and their property rights from revolutionary attack.

At the same time that social welfare ideology and legislation were evolving, a precedent dangerous to private property and voluntary economic enterprise was being set by the development of public ownership and regulation of water, road, transportation, and other systems. Public ownership and regulation were usually undertaken in the name of public safety and often with the support of whatever business interests were involved. When the American railroads, for example, had brought themselves to the verge of bankruptcy through uneconomic competition with one another, they welcomed the establishment of regulatory bodies, both

¹ For the growth of this idea, see C. R. Fish, *The Rise of the Common Man, 1830-1850* (Macmillan, New York, 1944); for an exposition of it, see R. Pound, *Social Control through Law* (Yale University Press, New Haven, 1942); and for some of the many ways that this idea has been carried over into practice, see H. I. Clark, *Social Legislation* (Appleton-Century, New York, 1940).

state and Federal. In many instances, privately owned streetcar companies actually sponsored municipal ownership so that they might sell out to the city government at a profit rather than die under destructive competition with other companies.

Both state regulation of business enterprises and public ownership and operation of productive properties are, of course, in violation of capitalistic ideology. As state regulation has been extended gradually to include well-nigh every form of economic endeavor and as public ownership has steadily encroached upon private ownership, these governmental practices have become acceptable to most Western peoples. They may cling, as do the Americans and the British, to the ideal of pure *laissez faire*. But they now accept state limitation on property usage and state ownership of a great many forms of property as normal conditions of social life. As a consequence, absorption of economic functions by the state, now usually referred to as the "socialization" of industry, seems likely to be the trend for some time to come.¹ Already the term "private property" has lost all meaning. In one way or another and usually in a number of ways the owner of productive properties is held responsible by the state to society at large. In all modern nations taxation has become an instrument of public policy rather than simply a means of securing public revenues, as it was in times past; and the biggest of big businesses is government. How far the process of socialization will run no sociologist and few businessmen would venture to predict. Certain, however, is the fact that the differences between the allegedly capitalistic nations—such as the United States—and the allegedly socialistic states—such as Soviet Russia—is even now only a matter of degree.

Every extension of the functions of the state has necessarily involved an increase in the powers of the state and, in most instances, increasing centralization of political authority. In the United States, as elsewhere, local political units—counties, municipalities, and states—have lost importance as the central government has taken on economic and welfare functions. This trend toward centralized political authority is in accord with the economically and socially unifying effects of new production techniques, of new modes of communication, and of new means of transportation. At the same time the centralization of political authority has wrought marked changes in the form of government. The representative form of government evolved to meet the desire for minimal political interference with the freedom of the individual, and it was well designed to serve this end. (The American Constitution, for example, was constructed with a view to precluding any person or governmental agency from acquiring

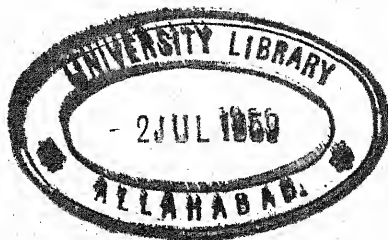
¹ See R. A. Dixon, *Economic Institutions and Cultural Change* (McGraw-Hill, New York, 1941); and J. M. Clark, *Social Control of Business* (McGraw-Hill, New York, 1939).

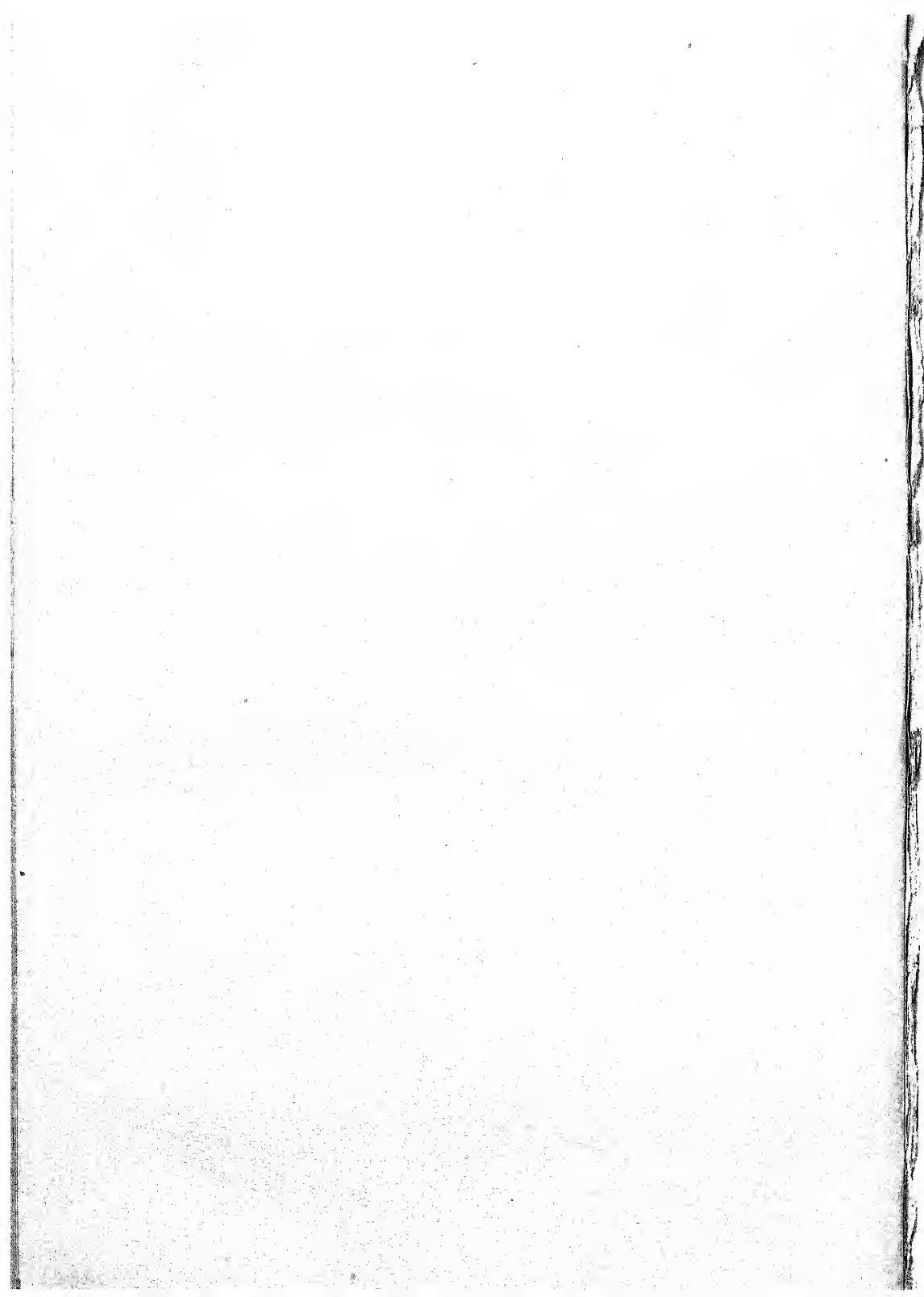
large powers—by the system of so-called “checks and balances.”) But representative government cannot conduct with any efficiency and in terms of long-range problems the vast and complex economic and welfare activities with which the modern state is burdened. As a consequence, the representative form of government has gradually given way to what is essentially a bureaucratic or “administrative” form, in which the representatives of the people, the legislators and elected leaders, are over the long run of far less importance than the multitudinous bureaucrats who actually are “the government.”

The need for state welfare legislation and for state ownership and regulation of economic enterprises is usually quite evident. Economic competition is often socially wasteful (particularly in the distribution of goods), and it not infrequently leads to extravagant expenditure of human life and irreplaceable natural resources. Under free competition, for example, hundreds of oil wells have been drilled into a single oil pool; and the oil has been taken out of the underground pool in such a way that only a fraction of the total oil in the pool can ever be brought to the surface. Under competitive conditions, little effort was ever made to protect the worker in dangerous occupations, if for no other reason than that the employer who considered the health and safety of his workers could not compete economically with those who disregarded such matters. Private enterprise has frequently led to the expenditure of human effort and materials in socially useless or even disadvantageous channels, as in the production of medical nostrums, the construction of submarginal tenements, and the building of useless railroads as an excuse for the floating of even more useless stock certificates. Moreover, the free enterprise system has everywhere and at all times led to such maldistribution of wealth that mass purchasing power has consistently fallen far below potential productivity, with the result that the rate of economic activity has repeatedly shifted from high to low, from that social oddity known as overproduction to that equally strange state of affairs described as a depression.

Such socially unprofitable consequences of unregulated private enterprise have encouraged the gradual extension of the powers of the state. This extension is, however, probably at the expense of enterprise, individual and collective. In general, people who are assured that their government will look out for their welfare are disinclined to look out for themselves. And agencies of the state are, for reasons given earlier, even more subject to bureaucratic rigidity than are business and other forms of organization. Thus fear of governmental regulation is not alone a fear of losing opportunities for large economic gains. It arises in considerable part from the fear that governmental interference would mean the end of individual initiative; that under governmental supervision the production

of steel, the cultivation of the soil, and the cure of human ills would become routine matters and businessman, farmer, and physician would be encumbered with so much red tape that they would have little time left to engage even in routine productive work. Whether the Russian experiment with state socialism has demonstrated that state-owned or state-controlled industry, agriculture, medicine, education, etc., need not become static and paper-bound is still a matter of dispute, mostly ideological, for as yet no facts are available.





Nationality is a matter of political definition and may be changed not only by war or the peace settlements following a war but also by the individual, who may upon occasion renounce his attachment to the nation of his birth and gain citizenship in a nation of his choice. Ethnic identity, on the other hand, is a matter of cultural definition, of the particular family and other social groups within the nation into which the individual is born and by which he is socialized; and it cannot be changed at will. Ethnic groups are, therefore, on the whole more durable than nations; and ethnic group differentiations are beyond the power of law—domestic or international—to change. As American experience has amply demonstrated, it is a simple matter to make Poles, Jews, Germans, Italians, Japanese, and peoples of other nationality into American citizens; but it is a slow and difficult process to make them over into Americans.

The Origins of Ethnic Differences.—Distinctive ethnic attributes are at the outset the product of long-time isolation, either physical or cultural or both, during which a people develops its own culture in terms of its particular habitats and other local factors. For most of human history most of the peoples of the world were isolated for long periods; and, consequently, very many and very marked ethnic differences between them evolved. Changes in the physical or biological habitat, the pressure of growing population, or the appearance of adventuresome leaders from time to time set some ethnic groups on the move in search of new and better lands or in search of other peoples who might be conquered and plundered. The Romans sent their armies throughout Europe and the Mediterranean area, subjugating the various peoples whom they encountered and encompassing them all into one vast politico-economic unit. As the Roman Empire disintegrated, the Goths and the Visigoths, driven perhaps by climatic changes in their natural habitats or more probably drawn by the prospect of plunder, came westward into Europe, bringing with them their primitive and tribal modes of life. During the thirteenth century the Mongolian hordes of Genghis Khan swept down from their arid homeland to conquer the peoples of China and almost, but not quite, take the islands of Japan. Such waves of migration and conquest intermittently broke the ethnic isolation of peoples and brought some admixture of ethnic groups. Moreover, there must always have been some infiltration by individual members of one ethnic group into regions occupied by another.

All movement of peoples, militant or peaceful, serves to break down cultural isolation of both invader and invaded, with the consequence that the distinctive ethnic attributes that have been developed in isolation become more or less mixed and, perhaps, blended. Over the ages the tendency for each people who inhabited a physically or socially isolated area to become ethnically distinct from all others was, therefore, some-

what offset by abrupt or continuous meetings with peoples constituting different ethnic groups. Nonetheless, the tendency for each people to develop its own peculiar culture and to become an ethnic in-group until very recently in human history always far outran the culturally unifying effects of the meeting and merging of peoples. Thus at the opening of the modern era (about 1000 A.D.), the peoples of the world were divided into a great many widely diverse ethnic groups, each of which occupied a fairly distinct region and was more or less isolated from all other ethnic groups.

THE END OF ETHNIC ISOLATION

As has previously been mentioned, the idea that the peoples of the premodern world lived in stable, independent, and untroubled groups is an historical illusion. Most of the civilizations of antiquity were expansionistic; neither the Egyptians, the Babylonians, the Greeks, nor the Romans were inclined to let their neighbors alone. Most of the barbaric peoples were warlike, some moving in hordes to destroy those who were more peaceful; and not a few were predatory, living not by work but by preying on other peoples. In comparison with the ethnic-group movements and contacts that were to come, however, all such movements and contacts were slow and limited in scope.

With the medieval Crusades, the peoples of western Europe became expansionistic on a scale unprecedented in human experience. They also began to develop technical and other cultural attributes that in time made them the military superiors of all other peoples and rendered them capable of seeking out and dominating these other peoples. As a consequence there has occurred, in the centuries since, a rapid and intimate meeting and mixing of most of the ethnic groups of the world. Ethnic-group isolation has now all but disappeared; even the spatially isolated Eskimo is becoming, whether he wishes to or not, somewhat less a member of Eskimo society and increasingly more a member of the world at large. And as the various ethnic groups have been brought into association with one another, ethnic-group differences and the interrelations of ethnic groups have grown increasingly important.

The European Aspect.—The first phase in the unsettling of the peoples of the world was the admixture of the various ethnic groups within western Europe. As was indicated earlier, the Crusades reflected and furthered the decline of feudal isolation. Under feudalism there had been so little movement of persons and so little exchange of cultural elements that the peoples of each region had had their own distinctive ethnic characteristics. All Europeans were feudal; but they spoke a wide variety of languages and dialects, and they had distinctive regional customs, ideologies, etc. The technological, economic, and other changes that began shortly before the Crusades lessened the isolation that had per-

mitted the development of these ethnic differences and brought the peoples of various regions into associations of one sort or another. The peoples of Brittany, for example, began to trade and to fight with those of Normandy; and people from Brittany, Normandy, Alsace, and many other regions began to meet in Paris and the other growing cities. It was in part out of this meeting of peoples of different ethnic backgrounds that new cultural developments occurred. Even so, ethnic differences remained; and after hundreds of years of economic and political unification and after countless meetings and mergings of ethnically divergent individuals, the peoples of Europe are still fragmented into a large number of ethnic in-groups; and the troubles of Europe, political, social, and economic, are in no small measure a consequence of the failure of European peoples to work out either one all-inclusive culture or a functionally effective system of ethnic-group interrelations.

The ethnic-group situation in western Europe was considerably complicated by the infiltration, early in the Middle Ages, of numbers of Jews from southeastern Europe and the Near East, who brought with them a "trading-type" culture and their non-Christian religion and social practices. In the main the Jews settled in the growing towns, where they became an important factor in the development of medieval trade and manufacture. Although they initially intermarried with the native populations and adopted many elements of the local cultures (with the result that there are now ethnically distinctive French Jews, German Jews, Polish Jews, etc.), they in time formed into ethnic in-groups and from then on remained ethnically distinct. As a consequence the "Jewish problem" of Europe is not appreciably closer to settlement today than it was in the seventeenth century.¹

Further complicating the ethnic-group situation in Europe in recent centuries has been the differential rate and character of social change in the various regions of Europe. Particularly since the beginning of the industrial revolution, the technological and associated changes that in one way or another have brought some ethnic groups into closer association and partly leveled their ethnic differences have at the same time increased the gap between other ethnic groups. The people of Normandy, for example, have become more or less industrialized and urbanized over the past hundred years and, consequently, ethnically further removed from the people of adjacent Brittany, who have remained largely preindus-

¹ See J. Trachtenberg, *The Devil and the Jews: The Medieval Conception of the Jew and Its Relation to Modern Antisemitism* (Yale University Press, New Haven, 1943); and C. Roth, *A History of the Jews in England* (Oxford University Press, New York, 1942). For some aspects of the situation in America, see I. Graeber and S. H. Britt, *et al.*, *Jews in a Gentile World* (Macmillan, New York, 1942); and O. J. Janowsky, ed., *The American Jew: A Composite Portrait* (Harper, New York, 1942).

trial. Likewise, as the Flemish of Belgium have become industrialized they have become less than ever like the agrarian Walloon. Elsewhere in the world; in India, in China, in Japan, etc., these same varying ethnic consequences of differential social change are now becoming evident; as some of the peoples are being unified into an industrial-type society, they are at the same time being set farther apart than ever from the remainder.

European Expansionism.—By the fifteenth century the peoples of western Europe were beginning to explore the world and in the process were beginning to encounter a variety of non-European peoples. The period of world exploration and the many factors that brought it about have been discussed in another connection. On the technological side, the improvement of ship technology and the revival and improvement of the arts of ocean navigation were particularly important. Together, these developments gradually made it possible for Europeans to venture beyond the known world into the vast unknown. The desire to do so, which was quite as necessary as the ability to do so, was itself a consequence of the technological and other changes that were producing new forms of economic and political organization. For one thing, the rise of a money economy gave new value to gold and encouraged the search for gold, little of which is to be found in the soil of Europe. For another, Europeans became avid for the spices of the Orient, which were being brought to Europe in small quantities by land and water through chain trading and which were literally more precious than gold. Moreover, as strong kings emerged in western Europe and the whole of Europe was integrated into kingdoms, the only ways that an ambitious monarch could extend his wealth and power were by attacking neighboring kingdoms and by seeking dominions over the seas. During the fifteenth century, while the kings of northern Europe were still occupied largely with the task of consolidating their realms or encroaching on their neighbors', the Spanish and Portuguese were setting the pattern of conquest and exploitation that was to be followed, with variations, by all subsequent explorers.

During the next four centuries nearly the entire world was brought under direct or indirect domination of Western peoples. In the process, European was often in conflict with European. And wherever they went, the Europeans sooner or later came into conflict with the natives.¹ At the outset the object of the Europeans was plunder—gold, spices, and slaves; and the search for plunder often led to the slaughter of a considerable proportion of native populations, as was the case during the Spanish conquest of Central America. Subsequently, economic exploitation tended to replace military conquest, although the British trade with India and

¹ For a brief history of European-non-European relations and an extensive bibliography, see S. T. Roberts, "Native Policy" (*Encycl. Soc. Sci.*, vol. 11, pp. 269-283).

China, the Belgian trade with the Congo, and the French trade with Indo-China was often implemented by force.

Today, every "empire," whether political or simply economic, is dominated by one or another of the Western powers. The conclusion of the latest war terminated the first important bid by a non-Western society—the Japanese—to gain political and economic domination of a large segment of the world's territory and population. During the course of that conflict, most of the few ethnic groups that had still remained comparatively isolated and free from Western domination, the various primitives inhabiting the islands of the Pacific, for example, were embroiled as bystanders.

The settlement of new lands by Europeans was commonly undertaken, as in the case of the Pilgrims, by malcontents who hoped to establish in the new lands what they believed to be the perfect society. All such colonists proceeded on the assumption that the new lands were to all intents and purposes uninhabited, a procedure that inevitably brought them in due time into conflict with the natives, who had their own ideas about landownership and usage. Usually the conflict was resolved by the colonists either destroying the natives or displacing them. North America, Australia, New Zealand, and some other areas of the world were taken over by European peoples in this fashion.

In some regions of the New World Europeans followed out a program of conquest rather than displacement. Here the Europeans came as military conquerors to subdue the native population, dispossess them of their lands, and put them to work on those lands as forced laborers. The procedure involved the introduction of some of the European techniques of tillage and the development of specialized crops. In those regions, the southern part of North America and the islands of the Caribbean, for example, where the native population either could not be subdued or was insufficient for the needs of the conquerors, slaves were brought from Africa, with resulting ethnic-group complications that have not even yet been resolved. In South America, Central America, and the more fertile islands of the South Seas, such as the Dutch East Indies, few slaves were imported. In these regions Europeans became the landowning and land-managing masters; and the natives became tenant farmers or hired agricultural laborers. In South and Central America the Europeans and their descendants came to be a hereditary dominant group, and the difference between them and the natives has gradually lost much of its ethnic character and taken on class characteristics. In the East Indies and some other regions, on the other hand, the Europeans have remained distinctly European and hence ethnically as well as economically distinct from the natives.

Modern Migrations.—The movement of peoples, particularly Europeans, that was begun with the Crusades has never ceased. There was something of a lull in this movement during the century or so preceding the industrial revolution; for by then many of the new lands had already been conquered and settled, and the peoples of Europe were engrossed in the political, religious, and economic developments that finally culminated in the introduction of machine techniques of production. As has been indicated, this latter event profoundly disturbed all existing organizational relationships and led to profound unrest, first in Britain and later on the Continent. With the subsequent introduction of the railroad and the steamship the rural peoples of Europe were made aware of the new lands and were able to gain access to them.¹

The unrest wrought by the industrial revolution and the opportunities afforded by the new means of transportation contributed to the making of a new period of European migration and the subsequent rise of a new set of ethnic-group relationships. At the time of the American Revolution the population of the American colonies was almost entirely native-born; and although it consisted of a variety of fairly distinct ethnic groups, such as the Scotch-Irish hillbillies of the Appalachians and the so-called "Pennsylvania Dutch," these groups had long since worked out methods of getting along together or, as was the case with some of them, had become more or less isolated. The new immigrants who came shortly after the opening of the nineteenth century in a series of increasingly massive waves—Irish, Germans, Swedish, Norwegians, Danish, etc.—all created, mainly on a local scale, new problems of ethnic-group relationships. For the languages and other aspects of the cultures of these peoples were distinct from those of the native Americans.

Toward the close of the nineteenth century the character of the immigrants into the United States changed and in such ways that the problems of ethnic-group relations became even more acute. Immigration from northern Europe declined, while that from central and southern Europe increased enormously. Jews from both Russia and southeastern Europe came in steadily increasing numbers; they were of many nationalities but of one faith and one general ethnic identity. Serbs, Croats, Czechs, Poles, and other central Europeans came to man the rapidly developing heavy industries. Italians, Greeks, and others from around the Mediterranean came to work in the textile and leather industries of New England, to operate restaurants and fishing fleets, and to grow market

¹For a general survey, see D. R. Taft, *Human Migrations: A Study of International Movements* (Ronald, New York, 1936). See also O. Handlin, *Boston's Immigrants, 1790-1865: A Study in Acculturation* (Harvard University Press, Cambridge, 1941); and M. L. Hansen, *The Atlantic Migration, 1607-1860* (Harvard University Press, Cambridge, 1941).

produce. Chinese peasants from the Canton area came to make their fortunes working on the railroads and stayed to settle along the West Coast. And following them came the Japanese to add their ethnic attributes to the cultural potpourri that was, and in some measure still is, America. More recently there has occurred a considerable migration of humble Mexican peons into the Southwestern states. Ethnically, all these later immigrants differed far more from the native Americans among whom they settled than did the Germans and other northern Europeans who preceded them. The problem of ethnic-group relations was therefore much intensified.

The convergence on North America of peoples of different ethnic-group origins has been paralleled on a lesser scale in most of the regions of the world. Dutch and British settled in South Africa to dominate the natives through two dissimilar and conflicting systems of social life. First Portuguese, then British, and later representatives of all Western societies imposed themselves upon the Chinese. Chinese, and later Japanese, moved in numbers down through the South Seas to bring an Oriental flavor to the native Melanesian cultures. Spanish and then Americans settled among the various tribal peoples of the Philippines.

Today each sharp disturbance of the economic and political life of a people tends to start new migrations and thus to produce new meetings of ethnically diverse peoples. The Russian Revolution, for example, loosed tens of thousands of Russians on the world at large. Some of them settled in France, some in Manchuria and other parts of the Orient, and some few filtered into the United States. The recent war has displaced—*i.e.*, torn from their normal social memberships—millions of Europeans with a great variety of ethnic backgrounds. Their final distribution is not yet settled; but wherever they go, they will take with them many social attributes different from those of their reluctant hosts.

The Interrelations of Ethnic Groups.—In no two instances have the interrelations of different ethnic groups run exactly the same course. The Spanish explorers of the New World and the native Carib tribes were at war from the very outset; and the conflict, although interrupted, did not cease until the Carib peoples were more or less exterminated. The culture of the Caribs was such that they could not live peaceably in any way with any other people. Intensely predatory, they were the scourge of the productive tribes of the West Indies; and they attacked the Spanish, who were also at the time a predatory people, as they did all others. The relations of the Spanish and the natives of the region that is now California, on the other hand, were never anything but peaceful. The Spanish who came into this region came in small numbers and were more intent upon acquiring lands for their king and souls for their God than gold. They found a few exceedingly primitive and passive

natives, whom they taught something of the arts of agriculture and whom they utilized in the building of their mission towns. Thus the relationship between the Spanish and the California natives soon developed into one of functional interdependence.

Toleration.—The experiences of Europeans with non-Europeans and in many instances of various European ethnic groups with one another have ranged between the two extremes exemplified by Spanish-native experience and have usually changed through time. When, as has often happened, there has been no initial opposition of their interests, two ethnic groups have sometimes accepted each other on the level of toleration. In a tolerative relationship each ethnic in-group looks upon the other with curiosity, often admixed with admiration or with humorous contempt, and quickly develops its own interpretation of the strange ways of the other, explaining those ways by a variety of myths, which are, of course, invariably far from the truth. Each group remains distinct and largely independent of the other, their relationship being somewhat analogous to that of host and guest, merchant and customer, soldier and civilian, or performer and audience. Each group expects the members of the other group to behave in the strange and incomprehensible ways that are ascribed to them; and each judges the other group not by its own in-group standards but by how well the other group lives up to the expectation that it will be different.

Many of the very early associations of Europeans with non-Europeans were tolerant in character. Early world travelers, such as Marco Polo, were received in foreign lands with curiosity and were accorded safe conduct; and they returned to Europe either with admiration for the strange peoples whom they had visited or with amused contempt for them. (Obviously, those who had not been received with toleration did not return to tell their stories.) Such early reports combined with European ethnoconceit to prepare explorers for a gracious welcome by the natives whom they would encounter in their search for gold and spices. Columbus, for example, seems never to have doubted that, once he reached the Indies, the Great Khan would gladly submit to the rule of the even greater King of Spain. Consequently he took few soldiers and little military equipment with him on his first voyage. In his journal of this voyage he constantly remarks upon the strange heathen virtues of the natives, accepting the ready welcome of some of them as no more than his due and complaining of those who behaved in warlike and belligerent fashion. Reports such as his and the captives who were taken back to Europe and put on display as examples of the noble savage only confirmed what Europeans had already come to believe—that the outer world was inhabited by curious creatures, all much in need of the blessings of Christianity and most quite willing to give gold or spices in

return. This provincial idea persisted in Europe for centuries and colored the relations of Europeans with non-Europeans throughout the period. Even so late as the last century Americans were considerably amazed to find that Admiral Perry had to force the Japanese to open their door to trade and intercourse with the West. And until well into the present century the "wild man of Borneo" was a stock attraction at county fairs and circus side shows.

In the main, the American and African primitives and even the Asiatics initially accepted the strangers from overseas with tolerance. Japan, for example, did not close its doors to trade with Westerners until Westerners had made themselves intolerable. Non-European peoples were ordinarily at first meeting impressed by the size and blondness as well as by the ships, the weapons, and the glittering trade-goods of their visitors. With some striking and bloody exceptions, European explorers, traders, and even settlers were at the outset accepted as interesting and remarkable people (much as the natives were looked upon by the Europeans) and were treated with respect or at any event toleration.

The American Indians, for example, were initially quite tolerant of the Pilgrim settlers; in fact they apparently fed the inept settlers for the first year or two, and they certainly taught them the art of corn cultivation. And the Pilgrims were for a time willing to tolerate the heathenish practices of the Indians. Tolerant likewise were the initial relations of the Americans and the Irish immigrants who came in large numbers during the 1840's. Out of this phase of American-Irish relations came the American stereotype of the Irishman as a clay-pipe-smoking, wheelbarrow-pushing character, full of witty but not profound sayings. And it was out of a similar period of tolerance between escaped Negro slaves and Northerners that there came the Northern white version of the Negro as an ever-cheerful incompetent, always good for a song and a buck and wing. The members of most of the various ethnic groups that emigrated to America were in fact initially tolerated by their predecessors—the "native" Americans.

ETHNIC-GROUP CONFLICT

In most instances toleration has sooner or later given way to some kind of conflict between the divergent ethnic groups. Conflict arises from a variety of factors and occurs on a number of levels. A not uncommon circumstance that leads to conflict between initially tolerant groups is the developing desire by the members of one group to become like the other group and to gain admission into its social membership. Just as a guest in a household becomes difficult when he begins to break from the role of guest and to assume some of the ways and prerogatives of his host, so the ethnic group that begins to adopt the ways and to

demand the rights of membership in a neighboring ethnic group becomes irritating and troublesome.

Ethnically unlike groups do not necessarily come into conflict in the course of time. There have been many instances, the Moslem colonies in China and the Dunkers and the Mennonites in America, for example, in which ethnic groups have long lived amiably side by side. But apparently whenever one of two associated ethnic groups breaks from the role assigned to it by the other and begins to become like that other, there arises an opposition of interests, if only the interest of the one to remain ethnically distinct and of the other to lose its distinctiveness, that leads to conflict.

A second circumstance that makes for conflict, often associated with the one just discussed, is the numerical increase and high concentration of the members of an ethnic minority. The New England town that is quite tolerant of a small number of French-Canadian immigrants may become alarmed and intolerant when the number of French Canadians increases to the point where they occupy a numerically prominent place in the town; for they may then jeopardize many established aspects of town life—they may, for example, bring about a shift in the balance of political power. The Northern town that has long tolerated a few Negro families may grow intolerant of Negroes as the number of Negroes increases. (Conversely, when the members of a much-disliked ethnic minority diffuse throughout the larger population, their presence tends to become less irritating; and antagonism toward them may gradually disappear.) The more violent forms of ethnic-group conflict invariably occur at those places where there is a high concentration of minority-group members. Anti-Semitism in America, for example, is most intense in and around New York City, where the concentration of Jews is high; and antagonism toward people of Japanese ancestry is strongest along the West Coast, diminishing even as their numbers diminish toward the east.

Opposition of Interests.—Conflict between ethnic groups is at basis a clash of two systems of life, which may be most simply described as an opposition of interests. The opposition of interests may be, as was indicated above, the desire of one group to remain discrete and superior and the desire of the other group to gain admission to membership in the would-be discrete group. Often, however, the opposition of interests is of a more obvious and definitive character. The relations between Columbus and all the peaceful natives whom he encountered on his first voyage were initially tolerant. But Columbus was searching for gold and spices; and when it became clear that there were none to take home to his queen, he was driven to the expedient of capturing and enslaving some of the natives to sell in Spain. His interests and those of the natives

were thus brought into opposition, and the natives soon learned either to flee at the approach of Spaniards or to fight against them. Much the same sort of thing occurred during the Portuguese exploration of the African coast. When no gold was to be found, the Portuguese resorted to the enslaving of the African natives, who came to consider all Europeans enemies.

The slave trade is perhaps the simplest example of an opposition of ethnic-group interests. Somewhat more complex is the opposition that has almost invariably developed between settlers and the original inhabitants of a region. European settlers usually just appropriated the lands of the natives, disregarding native concepts and practices, and then applied European land laws and land usages to the appropriated lands. The natives did not, of course, comprehend these laws and usages and often would not submit to them. Native violation of European precepts then led to the punishing of the natives—often simply by shooting them—whereupon the natives would retaliate, perhaps by burning down the settlement and killing off the settlers. The next group of settlers would come prepared to fight it out with the natives. Even where the Europeans endeavored in the interests of peace to purchase the lands that they wanted, they frequently violated native practices. The lands were almost always held in common by the natives and could not be sold in the European fashion even by the native chieftains.

The clash of economic interests that grows out of differences between the economic systems and economic values of two ethnic groups has been responsible for much of the ethnic-group conflict that has plagued the peoples of the world over the past few centuries, and it is still an important factor in such conflict. During the early part of the last century, for example, capitalism—in the person of Western traders—came into conflict with the guild system of the Chinese. European traders, adhering to capitalistic precepts, wanted to sell as much goods as they could in China; and they would sell to anyone who had the necessary gold or silver. Their interests were thus opposed to those of the Chinese mercantile guilds, which exercised a monopoly over trade and were interested in keeping down imports so that the price of imported goods could be kept high. A similar clash of economic interests seems to have been in part responsible for the growth of antagonism toward the Jews of medieval Europe. It will be recalled that the Church prohibited lay Christians from lending money at interest and that the Jews, free from Church rule, were able to profit where the lay Christians could not. It was, of course, to the interest of the Jewish moneylenders (even as it was to the interest of the Church) to secure a high return on loans, while it was to the interest of the Christian borrowers to get money at low rates. No borrower loves a moneylender; and when the money-

lender happens to belong to a distinctive ethnic group, as was the case in medieval Europe, the borrower's antagonism tends to attach itself to that group. The medieval Jews furthered this antagonism by their general superiority at trading, a reputation for which has persisted down to the present day. That superiority was of ethnic origin; for the Jews who moved into central and western Europe during the early Middle Ages had come from a trading culture, whereas their gentile hosts were just beginning to develop trade practices and were little skilled in the arts of commerce.

The most complex way in which an opposition of economic interests may arise and lead to conflict, and in recent American experience the most characteristic one, is that in which the minority group comes to compete unfairly or apparently unfairly with the majority. Although competition is always and everywhere limited and regulated, the limits and regulations vary considerably between various societies. Immigrants to America have in the past usually been welcomed as a supply of cheap labor for industry or for the farm. Thus the Irish were a cheap-labor boon to the soft-coal regions of Ohio and Illinois during the 1840's; the Germans and other northern Europeans were accepted in Wisconsin and adjacent states as cheap farm labor a few decades later; the Chinese were welcomed as common laborers during the building of the Western railroads; and the Greeks, Italians, and central Europeans were encouraged during the latter part of the century to come to serve in the low-paying jobs in the growing textile, leather, steel, and other industries. In each instance the immigrants did work no one else wanted to do and at wages no one else would accept. They did not, therefore, compete—fairly or unfairly—with the native Americans.

As long as the immigrants stayed in their lowly economic niche and as long as the general level of employment was such that native Americans did not want to enter that niche, there was no economic competition and no economic basis for conflict. But these conditions never remained for long. Either the immigrants began to enter the occupations of the natives, or economic crisis made the immigrant's job a desirable one. The native American workers and small businessmen then felt that the immigrants were competing with them unfairly, and they took such measures as they could to dispose of this "unfair" competition. The fact that European and Asiatic standards of living were generally far lower than those in America gave substance to the charge of unfair competition. The immigrants would work longer and harder and under more adverse conditions and for less pay than would native American workers.

Prejudice.—The attitudinal aspect of ethnic-group conflict has been studied intensively by sociologists, social psychologists, and psycholo-

gists.¹ Conflict gives rise to and is accompanied by antagonistic attitudes, prejudices, on the part of the ethnic majority toward the ethnic minority, and vice versa. These prejudices are folk versions, or stereotypes, of the characteristics of the members of the ethnic out-group. They serve on the one hand to close in-group membership and to keep the distinction between ethnic in-group and out-group clear. They also serve to perpetuate on an attitudinal level ethnic-group conflict that began as an actual opposition of interests. Thus if the ethnic majority has come to believe that the minority is noisy, aggressive, dishonest, and otherwise intolerable, the minority will be so regarded and so treated, at least over the short run, whatever the objective facts may be.

Not all the prejudices that develop toward an ethnic minority are the product of conflict that has arisen from a real opposition of interests. Often they are the embodiment of a long series of intergroup misunderstandings and irritations, no one of which is important in itself but which all together add up to a marked prejudice of the one ethnic group toward the other. The very fact that people speak different languages or different versions of the same language makes all interactions between them difficult, since interaction is effected by symbolic means. When to this source of difficulty are added different values, different attitudes, different ideologies and knowledge, different customs, and somewhat different institutional practices, the chances that friction will for long be avoided are close to nil. Only when ethnically divergent peoples live in worlds apart, as the Chinese in San Francisco's Chinatown came to live apart from the native population, can they long maintain harmonious relations. The closer and more intimate their association, the more numerous are the occasions for friction. The fact that the German immigrants of peasant origin did not bathe or change their underwear throughout the winter months was of no importance to the native Americans as long as the Germans stayed in farm colonies. But when, as sometimes happened, German families moved into towns and of necessity sent their unwashed children to school to mingle with the washed, the parents of the latter were understandably annoyed. Irritations of this order, leading in time to the development of strong prejudicial attitudes, have been fully as important in producing conflict as oppositions of economic or other fundamental interests, and occasionally they have been far more so.

ETHNIC-GROUP ACCOMMODATION

Conflict between ethnic groups, as between individuals and such other groupings as nations, is an intermittent rather than continuous process. Life must, or at least does, go on; and it cannot long go on if the atten-

¹ For some of the more recent studies of the sociopsychological aspects of ethnic-group conflict, see Supplementary Bibliography 13.

tion and energies of ethnic groups are continually directed toward obstructing each other. Upon occasion the Indian tribe raided the settlement, burning and killing the European settlers; and upon occasion the ire of the colonists rose to such a pitch that they made an expedition against the Indians. Upon occasion the native Americans took action, through legal or other means, to put the disturbing immigrants "back in their place." And upon occasion the struggles of the Negro to gain higher status in American society have become sufficiently irritating to whites, or sufficiently dangerous to "white supremacy," to provoke new legislative discriminations or outright violence, usually of a mob character. But most of the time the Indians and the colonists and the Americans and the immigrants maintained some semblance of peace; and although contemporary white-Negro relationships are a continual problem, they rarely break over into outright conflict. The resolution of periods of conflict between opposed ethnic groups and their interrelations during periods of peace involve some degree of accommodation.

As a Process.—As a process occurring through time the accommodation of ethnic groups one to another involves a modification of the ethnic differences or opposed interests that are the basis for conflict. The modification may involve one or both of the ethnic groups, and it may be either temporary or permanent. Defeated in an encounter with the colonists, for example, an Indian tribe might retire to the forests, abandoning for the moment its tribal interests in the lands held by the settlers. Emotionally and physically exhausted by hours or days of street rioting against Negroes, the whites may "forget" for the while that the Negroes have displaced them from their jobs, etc. (Rioting against Negroes here in America is, of course, a far more complex phenomenon. Usually the Negro is not in any strict sense the occasion for the violence but is rather a symbol for the whites of the conditions that underlie their discontent. This use of a minority group as a symbol of conditions giving rise to discontent will be discussed in connection with revolution in the last chapter.)

Permanent modification of opposed interests involves an actual change in the culture of one or both of the ethnic groups. Accommodation is here a process of learning, or social adaptation, that involves the invention or borrowing of devices whereby the one ethnic group develops modes of life, economic and otherwise, that complement or supplement those of the other. Even under the best of circumstances this process is slow, and rarely does accommodation occur under the best of circumstances; *i.e.*, it is usually interrupted by periods of conflict and retarded by the prejudices of one or both the groups.

Patterns of Accommodation.—The accommodative relationships of ethnic groups range from an uneasy truce to a stable, more or less institutionalized, arrangement in which each of the groups has its special functional role and the two roles are interdependent. In the working out of the latter pattern of accommodation, one ethnic group normally achieves and becomes accustomed to a position of dominance over the other, and the other becomes resigned to a position of subordination.¹

The relationship between the dominant ethnic group and the subordinate one is harmonious as long as the members of each group remain content with their status. When such a relationship persists through time, it becomes more or less self-enforcing and takes on the characteristics of a caste or class system. The caste system of India, for example, was apparently produced by successive waves of non-Indian conquerors, each new wave becoming in time a new social elite to which the various pre-existing groups accommodated themselves. The British, like others before them, only extended this caste-making process; they came, and they conquered, and they have ever since remained aloof from the native population. Not all the many groups of which the Indian population is composed have yet accommodated themselves to British rule, and perhaps they never will do so. But between the various preexisting castes there has been until recently a high degree of accommodation. The untouchable, for example, was likely to be just as horrified when his shadow fell upon the member of a higher caste as was the higher caste member.

Accommodative relationships take any one of a great many forms and may be centered around economic, political, religious, or some other social core. In North America the recurrent conflict between the primitive natives and the European settlers was eventually resolved by the settlers driving the surviving Indians into reservations and later making them government wards. In South America and many other places the descendants of the original inhabitants, as was indicated earlier, have been pushed into economic peonage, denied equality before the law, and kept unlettered and passive.² As a consequence, the general level of culture in the Latin American countries has remained relatively low, and the various social systems there have characteristics reminiscent of feudalism. In South Africa the pattern of accommodation between Euro-

¹ For descriptions of four different modes of ethnic-group accommodation, see J. Dollard, *et al.*, *Caste and Class in a Southern Town* (Yale University Press, New Haven, 1937); O. Leonard and C. P. Loomis, *Culture of a Contemporary Rural Community: El Cerrito, New Mexico* (Bureau Agricultural Economics, U. S. Department of Agriculture, Washington, D. C., 1941); I. Levitats, *The Jewish Community in Russia, 1722-1844* (Columbia University Press, New York, 1943); and J. Useem and R. H. Useem, "Minority-group Pattern in Prairie Society" (*Amer. J. Sociol.*, vol. 50, pp. 377-385, 1945).

² Compare W. C. MacLeod's "Native Policy" (*Encycl. Soc. Sci.*, vol. 11, pp. 260-269) with J. O. Capdequi's "Native Policy" (*Encycl. Soc. Sci.*, vol. 11, pp. 252-260).

peans and natives is a combination of the North American and South American forms. The natives have largely been relegated to reservations—"compounds"—where they follow their tribal ways in all but the matter of earning a livelihood. Since they can no longer maintain themselves by hunting or the grazing of herds, as they did when they were "free," they provide the dominant Europeans with a large reservoir of exceedingly cheap labor.

ASSIMILATION OF ETHNIC MINORITIES

The prejudices that develop during the course of intense ethnic-group conflict serve as barriers between the two groups and may preclude the absorption of the members of one group into the other. This freezing of ethnic-group memberships also occurs when the pattern of accommodation involves the subordination of one group to the other, for the dominant group will be strongly disinclined to take in as a member one born into the subordinate group. But when conflict between ethnic groups has not been too severe, when the attitudinal barriers between the groups have not become too high, and when the members of each group are physically much alike, the conflict may be resolved or the pattern of accommodation may be dissolved by assimilation, the absorbing of the members of an ethnic minority into the majority group. The assimilative process may continue until the minority group, and hence its distinctive ethnic attributes, has entirely disappeared. Most contemporary Americans are descendants of the members of one or more ethnic minorities—Irish, German, French, Scandinavian, Italian, etc.—that were gradually assimilated into the American population.

The usual prelude to assimilation is the acquisition by members of the ethnic minority, either through association with members of the majority or through such more formal means as attendance at schools that represent the culture of the majority, of at least the superficial attributes of members of the majority group. The American public-school system has, for this reason, been an important factor in the assimilation of many ethnic minorities. It brought the children of immigrants, if not the immigrants themselves, into somewhat intimate association with American children and otherwise enabled the immigrant child to acquire some of the cultural characteristics of Americans.

The usual mechanism of assimilation is intermarriage.¹ Having acquired, however superficially, the attributes of the majority-group mem-

¹For some recent studies of this process, see B. Berry, "The Mestizos of South Carolina" (*Amer. J. Sociol.*, vol. 51, pp. 34-41, 1945); I. L. Child, *Italian or American?* (Yale University Press, New Haven, 1943); R. J. R. Kennedy, "Single or Triple Melting-pot? Intermarriage Trends in New Haven, 1870-1940" (*Amer. J. Sociol.*, vol. 49, pp. 331-339, 1943); L. Nelson, "Intermarriage among Nationality Groups in a

bers, the individual may then gain admission to the majority group and detach himself from the group into which he was born by marrying a member of the majority group. Ordinarily admission to the one group and detachment from the other is partial and conditional. The Italian immigrant of a generation ago who married a native American did not by that act become an American or cease to be an Italian, any more than the American in China who marries a Chinese thereby becomes Chinese. But as the husband or wife of an American, the Italian was more or less accepted into the social group of which the American was a member by birth and training. When the acceptance of the spouse of a majority group member is less rather than more, both will be somewhat detached from their ethnic groups, unless, as often happened with Italian-American marriages, they fall back upon membership in the minority group.

The Ethnic Hybrid.—The position of the partners to a cross ethnic-group marriage will necessarily be most uncomfortable if the two groups are in marked conflict, awkward if the groups have achieved a dominant-subordinate pattern of accommodation, and relatively easy if the two groups are neither in opposition nor strikingly dissimilar. But whatever the fate of the partners to such a marriage, their children will be cultural hybrids.¹ The personality of the cultural hybrid is a mixture of minority-group and majority-group attributes, and his social status is somewhere between that of the one parent and the other. If upon reaching maturity a cultural hybrid marries a full-fledged member of the ethnic majority, their children will be still closer in personality attributes and in social status to the majority group. This process, which is a sort of social

Rural Area of Minnesota" (*Amer. J. Sociol.*, vol. 48, pp. 585-592, 1943); J. S. Slotkin, "Jewish-gentile Inter-marriage in Chicago" (*Amer. Sociol. Rev.*, vol. 7, pp. 34-39, 1942); A. I. Tannous, "Acculturation of an Arab-Syrian Community in the Deep South" (*Amer. Sociol. Rev.*, vol. 8, pp. 264-271, 1943); M. L. Barron, "The Incidence of Jewish Inter-marriage in Europe and America" (*Amer. Sociol. Rev.*, vol. 11, pp. 6-13, 1946); and H. B. Johnson, "Inter-marriage between German Pioneers and Other Nationalities in Minnesota in 1860 and 1870" (*Amer. J. Sociol.*, vol. 51, pp. 299-304, 1946).

¹ Where, as in the case of the Negro, inter-marriage is not possible, the cultural hybrid is one who has acquired many of the ethnic attributes of the majority and the desire to be accepted into the majority group but is excluded from it. See J. H. Atwood, et al., *Thus Be Their Destiny: The Personality Development of Negro Youth in Three Communities* (American Youth Commission of American Council on Education, Washington, D. C., 1941); A. Davis and J. Dollard, *Children of Bondage: The Personality Development of Negro Children in the Urban South* (American Council on Education, Washington, D. C., 1940); E. F. Frazier, *Negro Youth at the Crossways: Their Personality Development in the Middle States* (American Council on Education, Washington, D. C., 1940); C. S. Johnson, *Growing Up in the Black Belt* (American Council on Education, Washington, D. C., 1941); and W. L. Warner, B. H. Junker, and W. A. Adams, *Color and Human Nature: Negro Personality Development in a Northern City* (American Council on Education, Washington, D. C., 1941).

osmosis, may go on for a number of generations until all but the memory of the minority-group antecedents is gone, and perhaps not even that will remain. When considerable numbers of an ethnic minority are involved in this process, the entire group may disappear into the majority in a few generations. Assimilation of the minority by the majority is then complete.

The American "Melting Pot."—The process of assimilation almost invariably appears when two or more ethnic groups come into contact, irrespective of the nature of their relations. Conflict is seldom bitter enough and constant enough and the prejudices are seldom strong enough to prevent an occasional member of one group from marrying a member of the other.¹ Throughout the contemporary world there is a constant, although slight, assimilation of group by group through cross marriages and through the production of ethnic hybrids. But nowhere and presumably at no other time has the process of assimilation of ethnic minorities proceeded as rapidly and on as vast a scale as it has here in the United States during the past 150 years.

America has been called, with some reason, the melting pot of the peoples of the world. Here have been assembled representatives, often considerable numbers of them, of almost every ethnic group. Their assimilation has not been the easy process envisioned by the American idealists of a century ago. It has been accompanied by a great deal of ethnic-group friction and conflict; and it has involved much individual struggle and much personal unhappiness, for assimilation is hard on those who are undergoing the process. Moreover, the process is by no means complete; and, as will be indicated shortly, some ethnic minorities seem at the moment to be quite unassimilable. In spite of their many and diverse antecedents, the American people are, however, ethnically remarkably homogeneous. Certainly in comparison with the innumerable closed castes that developed in India as the solution to the problem of ethnic diversity, the American people are one happy family.

Today the descendants of many of the early immigrants to America, such as the Irish, Germans, and Scandinavians, have been so thoroughly assimilated that they no longer constitute ethnically distinctive groups. The more recent immigrants and their children, particularly those of

¹ Unsanctioned sex relations between the members of ethnic groups have little significance in assimilation. Offspring of such associations are almost always members in full, if not in good standing, of the group to which the mother belongs. The illegitimate by-product of a liaison between an American sailor and a Polynesian girl may have a lighter skin than his mother, but he will be Polynesian in all social regards. In some instances, such as that of the mulatto in the United States, the lightening of the skin has in the long run permitted the development of a status between the two ethnic groups and, ultimately, the passing over into membership in the majority group.

Sicilian, Greek, and central European origins, are as yet only partially assimilated; and considerable differences and some antagonism exist between the residual members of these ethnic groups and the American majority. The expectation is, however, that within another two or three generations these ethnic minorities, like the many that preceded them, will have all but disappeared from American society. There still remain the Negroes, the Chinese, the Japanese, and some other ethnic minority groups that have so far proved unassimilable.¹ Their status as inferior out-groups is fixed and their assimilation into the majority is prevented by prejudices that originally grew up during periods of ethnic-group conflict but that now operate to perpetuate the conditions that make recurrent conflict inevitable.

Elsewhere in the world a similar freezing of ethnic in- and out-groups has occurred. In most of Latin America there is an unbridgeable gap between the Indian peon and the peoples of European derivation. In South America, India, Malaysia, Australia, and elsewhere the dominant whites will neither assimilate nor be assimilated by the politically and economically inferior, ethnically distinctive natives. As long as those natives remain content with the status imposed after considerable conflict upon them, an accommodative relationship exists between them and the dominant whites. Like the Negroes of America, they have, however, become increasingly discontented with their status; and their discontent has brought them once again into conflict with the dominant whites.

THE IDEOLOGY OF RACE

Every in-group has its protective ideology, its system of beliefs, values, and rituals by which the group membership is kept intact and distinct from the rest of the social population. In most instances, however, the in-group ideology permits the entrance into the group of qualified individuals who were born into some other group. By marriage, women are brought into the family; by capture, serfs could be added to the feudal unit; and by adoption, the outsider could become a member of the tribe or village group. The principal exceptions to this general rule have been the endogamous tribal organizations of some primitives, the hereditary aristocracies and castes of certain premodern societies, and the "racial" in-groups of the contemporary world. The latter are ethnic groups that

¹For general studies of the ethnic groups in contemporary America, see F. J. Brown and J. S. Roucek, *One America: The History, Contributions and Present Problems of Our Racial and National Minorities* (Prentice-Hall, New York, 1945); W. L. Warner and L. Srole, *The Social Systems of American Ethnic Groups* (Yale University Press, New Haven, 1945); L. Wirth, "The Problem of Minority Groups" in *The Science of Man in the World Crisis* (R. Linton, ed., Columbia University Press, New York, 1945); and D. R. Young, *American Minority Peoples* (Harper, New York, 1932).

have become closed and hereditary through the development and maintenance of the ideology of race.

The core of the race ideology is the belief that ethnic differences between men are matters of blood—that they are biologically inherited along with such physical characteristics as eye, skin, and hair color.¹ This belief seems to be a peculiarly modern one and to have developed during the period of European exploration, conquest, and settlement of the world. Every intact ethnic group has considered itself a chosen people and its way of life superior to that of all other ethnic groups. But most ethnic groups have not believed, as do most modern whites, that the cause of this superior way of life was biological. Birth was not, therefore, the only way by which one could become numbered among the chosen. The ancient Greeks were very conscious of their superiority over “barbarians”; but anyone who behaved like a Greek could, whatever the color of his skin or the shape of his nose, qualify as a Greek. The Romans distinguished sharply between free men and slaves and between Romans and barbarians. They did not, however, deem a man a non-Roman simply because his skin was black or his hair was blond. The Chinese drew a line between aristocrats and commoners, and they were exceedingly jealous of the distinction between themselves as Sons of Han and other peoples as “barbarians.” But they considered being a Chinese a matter of training; and because of this view they succeeded in assimilating a variety of ethnic minorities with distinctive physical attributes, including a large number of Jews who migrated to the Orient during the first century A.D.

The Evolution of Racism.—The concept that has finally crystallized as the racial ideology and that has often served to preclude the assimilation of ethnic minorities began to emerge early in the process of world exploration. That concept was the product of expediency; it was a justification for the things that Europeans were doing to the non-European populations of the world.

Christian ideology drew a categorical distinction between man and beast. Man was a product of special creation, made in God's image; and the soul of man was therefore sacred. The beasts, on the other hand, were without souls and had been put here on earth for the convenience of man. Now all men were descended from Adam and Eve; hence all men were brothers, and all good men would treat all men as brothers. This mode of thinking about man may seem farfetched to the modern

¹ For critical discussions of this ideology, see J. Barzun, *Race, a Study in Modern Superstition* (Harcourt, New York, 1937); R. Benedict, *Race: Science and Politics* (Modern Age, New York, 1941); E. B. Reuter, “Racial Theory” (*Amer. J. Sociol.*, vol. 50, pp. 452-461, 1945); and L. L. Snyder, *Race, a History of Modern Ethnic Theories* (Longmans, New York, 1939).

mind. But whatever else they were, the people of the Middle Ages and those of some centuries thereafter were firm believers in Christianity, and they accepted implicitly the Biblical interpretation of the origin of man, and his role on earth. Ideologically, therefore, the peoples whom the Europeans encountered in their spread over the earth were as much the children of God as they themselves were and should have been treated accordingly. Actually, as has been indicated, the Europeans enslaved, exterminated, robbed, and otherwise bestialized the natives of Africa, the Americas, Oceania, and to the best of their ability those of India and Asia.

To reconcile ideology with reality, a new ideology evolved. In this ideology, non-Europeans were not human beings but were instead an inferior subspecies, closer to the beast than to man. The early explorers were wont to speak about the natural or simple savage, to impute to him some characteristics, such as ability to trail game by scent, that were not possessed by Europeans, and to doubt his possession of some attributes, such as ability to think, that were supposed to be characteristic of Europeans. To the myth of the simple savage that was thus developed, traders, settlers, and others who went among the various non-European peoples added a vast stock of misinterpretations regarding the life and customs of non-European peoples. It was easy, therefore, for European social philosophers to come to the conclusion that enslavement, extermination, and robbery of non-Europeans were justified by the fact that these peoples were actually nonhuman as well as non-European. Once the non-European was put into the category of beast, all was well; for in the European mores of the time the beast had no call upon human sympathies, and anything could be done to him with a clear conscience. The maiming of animals, even prized pets, was a common sport and continued to be so until comparatively recent times. No one, however sensitive toward the welfare of fellow humans, ever was the slightest bit concerned over the physical welfare of beasts—oxes, asses, pigs, cats, or dogs. If the simple savage and the Oriental were, then, but beasts, what was done to them was of no importance in the eyes of God or of man.

The rationalistic value of the idea that all non-Europeans were non-human is apparent in the case of the New England Puritans. They undertook the settlement in America as an escape from what they considered to be un-Christian conditions in England. Within the colony they made much of the brotherhood of man; and the individual who violated the Christian rights—as they defined them—of another person was most severely punished. Nevertheless, they soon faced the practical necessity of robbing the natives of their lands and of killing those natives who protested. And in time New Englanders founded a most profitable trade

in blackamoors.¹ The good Christian New Englander went to sea and there became the brutal slave trader. Presumably he would not think of enslaving a human being, created in God's image; but he would and he did purchase for a trifle natives captured in Africa, bring them to America in stifling holds, and sell the survivors at a good profit in the Southern slave markets. Only his belief that Africans were but a cut above dogs and pigs saved him, even as the similar belief regarding Indians had saved his ancestors, from the torments of his New England conscience.

The British opium trade offers another illustration of the rationalistic value of the concept that non-Europeans were nonhuman. Early in the British exploitation of India, the British East India Company began to bring opium, along with tea and spices, to England and the Continent; and in a short time opium was almost as widely used as tobacco and alcohol. Experience soon demonstrated, however, that the uncontrolled use of this drug was socially disastrous. For one thing, it made workers forget their hunger and, consequently, ignore their work. Antiopium movements appeared in the various countries of Europe, and one by one the governments placed severe restrictions upon the importation and use of opium. Left without a market for what had been one of its most profitable commodities, the British East India Company sought an outlet for opium in China. The Chinese, however, had long before made the possession of opium punishable by death; and thus the British had to call upon their navy to open the market for them. At home the question then arose, how could the Chinese justly be encouraged to take up the use of opium when it had proved undesirable in England and Europe? The answer that was advanced and that evidently was accepted was that the Chinese were a different species and that what was bad for Europeans was, fortunately for the British East India Company, good for the Chinese.²

Race Theory.—The idea that all men are brothers but that non-Europeans are not men was elaborated during the last century into the pseudo-scientific doctrine of racial differences and the inherent superiority of one race over all others. The doctrinaires were only expressing in systematic and ponderous fashion the long-standing belief of Europeans in their being a people apart. It is doubtful whether the elaborate attempts to bolster up this belief by the collection and analysis of "scientific" evidence actually did anything to strengthen and perpetuate it, for racial ideology was by then already deeply embedded in the culture of all

¹ For a brief history of and extensive bibliography on the slave trade, see A. L. Harris and S. D. Spero, "Negro Problem" (*Encycl. Soc. Sci.*, vol. 11, pp. 335-356).

² See W. T. Wu, *The Chinese Opium Question in British Opinion and Action* (Harper, New York, 1928).

Western peoples. The layman did not need proof that "Niggers," "Chinks," "Wops," or other subordinate ethnic groups were what they were because they had been born that way; the layman already knew that. The intellectualization of the folk belief in racial distinctiveness and racial superiority did, however, reflect the growing, rather than diminishing, importance of this ideology.

The Aryan Myth.—The rise of the biological sciences and, finally, the postulation of the Darwinian hypothesis of the evolution of man predisposed all late nineteenth-century philosophers to stress the importance of biological factors in social life. Many data, most of which have since been proved erroneous, were advanced in support of the racial interpretation of cultural differences and, in fact, of all human history. German philosophers were especially industrious in this direction, and with very good reason. The British, the French, and to a lesser extent the Spanish, the Portuguese, the Belgians, and the Dutch had developed overseas empires by conquest and had justified the things that they had had to do to the natives by the inherent superiority of Europeans over the other peoples of the world. By the time that the Germans entered the international arena, the valuable territories of the world had been staked out by their predecessors; and German political ambitions necessarily turned to the conquest of Europe. To justify this ambition, their political ideologists devised the Aryan myth, a variation on the old racial ideology. Not only are Europeans inherently superior to non-Europeans, they said, but some Europeans are superior to others; for there are many separate races within the European population, and of these the "Aryan," to which only the Germans belong, is supreme. This being so, it is inevitable that the Germans should dominate the British, the French, and the other lesser European races. Many German savants applied themselves to the verification of the racial superiority of "Aryans"; and more than a century before Hitler the belief in a distinct and specially gifted German race was proved to the satisfaction of all loyal German scholars. Not to be outdone, other loyal nationalists proved that their nation, Britain, France, or whatever, was composed of a race distinct from and superior to all others. Ultimately, even the Japanese ideologists found in the race concept a good excuse for the Japanese ambition to dominate the peoples of all Asia; and the Japanese people acclaimed themselves "Asiatic Aryans."

Racism as a Social Fact.—It is no part of the task of contemporary sociology to disprove the idea that the peoples of the world are divided into mutually exclusive biological groups and that one or another of these is superior to all others. For more than a century racial ideologists have been advancing first this and then that "evidence" that there are either four or upwards of four hundred distinct races and that each has its peculiar biologically caused behavioral characteristics. And for a

hundred years and more the "evidence" has failed to stand up under objective scrutiny.¹ The belief that Europeans are God's or biology's chosen people and all other peoples somewhat subhuman, the idea that some group of Europeans is inherently superior to all the others, the more refined idea that the various ethnic groups into which the people of the world fall are separate and mutually exclusive biological categories, each possessing somewhat distinctive biologically linked behavioral attributes—all these and every other idea that causally relates ethnic differences and biological factors can be dismissed as the ideological aspects of ethnic in-groupness. The sociologically important thing is not the invalidity of racial ideology but the fact that the ideology exists and has very real social consequences.

RACISM AND RACE CONFLICT

The racial explanation of ethnic-group differences reduces these differences to a law of biology from which there is no escape. The biological characteristics of men are comparatively stable; they cannot be modified by good intentions, by law, or by evolutionary social changes. If, then, the ethnic attributes of each people are caused by their peculiar biological heritages, there can be no movement of the members of one ethnic group into another. A Japanese cannot become an American because he was born to be a Japanese and not born to be an American; a Jew cannot become a good German because he inherited from his parents those characteristics that make him non-Aryan and hence non-German; an East Indian cannot be entrusted with political responsibilities because he was born of non-English stock and only those who are English by birth can possibly carry the white man's burden in India. And so, if the ethnic differences between the various peoples of the world are innate differences, they cannot be leveled. Thus the only sensible thing for an ethnic minority to do is to submit to the domination of its inherent superiors; and if it will not do so, the only way to avoid its being a cause of conflict is to exterminate all its members. The Nazi program for the extermination of all the Jews of Europe was undertaken with this rationale.

Actually, as has been shown, many ethnic minorities have been assimilated into majority groups. Members of the minority have passed, one by one, into membership in the majority because, contrary to the race ideology, they were able to acquire the requisite behavioral attributes and could no longer be identified as out-group members.

¹ The layman will find meticulous disproof of the racial concept in O. Klineberg, *Race Differences* (Harper, New York, 1935); and O. Klineberg, ed., *Characteristics of the American Negro* (Harper, New York, 1944).

The Racial Barrier.—It is only when the members of an ethnic minority happen to have distinguishing biological characteristics that the racial ideology is an effective barrier to their ultimate assimilation. A century ago the Irish immigrants were well on their way to becoming the most despised and subordinated ethnic minority in America. Around them there soon developed all the mythology of an inferior "race." But whatever his ethnic attributes, the Irishman was physically indistinguishable from Americans in good standing; and as he, or his son after him, acquired the speech and other behavioral characteristics of an American, he could, and often did, change his name and escape the social stigma of being Irish. Then as the numbers of identifiable Irish declined and as the remainder became more and more non-Irish in conduct, the prejudices toward "the Irish" also diminished.

The American Negro, on the other hand—and the same is true of an American Chinese and Japanese and to a lesser extent of the members of some other ethnic minorities—ordinarily inherits some distinguishing physical attributes. He may become in all behavioral attributes indistinguishable from American whites.¹ But he cannot escape being socially identified as a Negro. Although his inherited physical characteristics are of no importance in themselves, they are made to have great importance by the existence of the racial ideology. As long, therefore, as Negroes bear the physical signs of their origin, they, unlike the members of physically indistinguishable ethnic groups, cannot pass into membership in the majority group. Their membership in the ethnic minority is thus fixed, if not for all time, at least for as long as the majority persist in the belief that Negroes are an inferior race. And since they cannot in significant numbers filter upward into the majority group and in time disappear as a racial minority, the conditions that have made for discrimination persist and perpetuate the belief that Negroes are racially inferior to whites.

Thus it would seem that as long as there is a Negro minority in the American population there will be discrimination against Negroes; and as long as there is discrimination against them, Negroes cannot gain membership in the larger group.² No way out of this closed system of

¹ His chances of doing so are, of course, extremely slight. As a member of a subordinated group who is kept in that group, he has little opportunity to acquire the behavioral characteristics of the white majority. His educational, economic, political, and associational opportunities are rigidly limited by the fact that he is and can be identified as a Negro. That he remain ethnically a Negro is the intent of the dominant whites and the functional value, to them, of the race ideology.

² See G. Myrdal (assisted by R. Sterner and A. Rose), *An American Dilemma: The Negro Problem and Modern Democracy* (2 vols., Harper, New York, 1944). Myrdal takes a more optimistic view of the future of Negro-white relations in America than does any American sociologist. That there is nothing in the inherent

social forces appears at present. The same dilemma results from the ideological freezing of ethnic in-group and out-group memberships in most places where European "whites" have come into conflict with non-Europeans who are biologically somewhat less white—in Africa, in India, in Asia, and elsewhere. Wherever peoples of European origin have gone, they have taken the racial ideology with them; and it has operated to keep the peoples of European stock ethnically distinct from those of non-European origin. The American Negro problem is not, therefore, unique; it has its parallel in almost every land.

Passing the Color Line.—In America, as elsewhere, some few members of the ethnic racial minority do pass surreptitiously into majority group membership. Europeans, except for the French, have always hesitated and have usually refused to marry non-Europeans. The taboo on intermarriage is strong among so-called "whites" and is supported by a variety of beliefs, such as the black-baby myth that was mentioned in an earlier chapter. But whites have not hesitated to interbreed with those whom they would not marry; and occasionally the offspring of such interbreeding, mulatto, Eurasian, or person of other mixed biological antecedents, is physically more or less indistinguishable from "pure" whites. If such a person acquires the requisite behavioral attributes, he may then, should he care to do so, pass out of minority group membership into the majority group. The process is by no means simple, and it is the exception rather than the rule when the person of mixed blood becomes identified with the dominant rather than the subordinate group.

Passing the color line has become the ambition of a considerable proportion of American mulattoes. This was not always so. As everyone knew, the mulatto was in origin the product of an illegitimate relationship, usually one between a white man and his Negro mistress. As such, the mulatto was often acceptable to neither white nor Negro in-group. Whites considered him a Negro; Negroes tended to consider him socially inferior to full-blooded Negroes. As a consequence, the American mulatto long occupied a position of inferiority not only in respect to the whites but among the Negroes as well. Mulattoes tended, therefore, to live somewhat apart. The northward migration of Negroes, which became a significant movement after 1915, ultimately brought a new status to the mulatto. In the northern cities the mulatto was often given opportunities denied to those of darker skin. The light-skinned mulatto girl,

character of either Negro or white that precludes a merging of these two groups, no sociologist doubts. That the social factors—mainly ideological—which now keep them apart will be dissipated by any means, least of all political means, in the foreseeable future, few other than Myrdal believe.

For a variety of materials, other than those already cited in this chapter, on the Negro and other ethnic-group problems in America, see Supplementary Bibliography 14.

for example, was preferred by the whites as a night-club entertainer; and if she had the requisite money, manners, and clothes, she could perhaps patronize restaurants and other places where she could be mistaken for a Latin American or some other dark-complexioned Caucasian. Thus in time it came about that the lighter a Negro's skin and the straighter his hair, the higher was his esteem among Negroes. It was then but a step to passing out of the Negro group into the society of whites. Today passing the color line is fully sanctioned and effectively aided by the Negro community.

No one knows how many individuals born into the Negro out-group eventually pass into the white in-group. Only the failures, those whose Negro origin is discovered, become matters of record. The numbers must, however, be exceedingly small in comparison with the total Negro population; and although the fact that some do pass gives some support to the hope that in time the Negroes will be assimilated into the population as have been physically indistinguishable groups, the rate of assimilation is so slow that centuries might be required. During those centuries any number of things may occur to change radically the relations between whites and Negroes in America. For one thing, the Negroes cannot be expected to remain passive in their position as a subordinated ethnic group. In spite of the diligent efforts of the believers in white supremacy to keep the Negro in his place, the impersonal forces of social integration—especially the new techniques of communication and transportation—are gradually lessening the ethnic distinctions between white and Negro, even as they are between European and Asiatic, and between other groups of the world. As he becomes "white" in such important regards as his motivations, interests, social skills, etc., the Negro becomes ever more resentful of the fact that he is barred from full social membership by the inherently trivial but ideologically damning fact that his skin is dark. American Negroes, like the European dominated peoples of India, South Africa, and elsewhere, are showing increasing signs of restiveness; and racial conflict of unprecedented scale and character is not an unlikely prospect.

Chapter XVIII

CLASS, REGIONAL, AND OTHER FORMS OF INTRASOCIAL DIFFERENTIATION

THE members of an ethnic group are alike and united in that they were born into, or assimilated into, the same society and therefore share the same culture. They do not, however, share that culture equally; and within the ethnic group there are invariably many groupings, each with its somewhat peculiar social attributes and its special social status. These intrasocial distinctions are often as sharp as the distinctions between ethnic groups, and they may lead to conflict that is quite as bitter. During the course of relations with the members of another ethnic group, the intrasocial differentiations of an ethnic group are commonly ignored. But whenever members of an ethnic out-group are not present, the ethnic in-group breaks down into a variety of in-groups and out-groups.

As strangers in a foreign land Americans may be brought together by their common language and by the general similarity of their tastes, knowledge, ideologies, etc. No doubt they will be able to agree upon the inadequacy of foreign plumbing, the greed of foreign merchants, and the irrationality of foreign customs; and they may band together to outwit the merchants, find a decent hotel, and otherwise make the best of a disagreeable situation. It does not follow, however, that as Americans in America they will have comparable common interests and sentiments. In America they may belong to quite different social strata, they may have quite different regional affiliations, and they may be members of competing economic-interest groups. Likewise, among whites one Negro is pretty much like another Negro, but within his own ethnic group a Negro has a definite social status derived from his membership in one or a number of Negro in-groups. To Negroes, if not to whites, there are Northern and Southern Negroes, rich, poor, and in-between Negroes, good and bad Negroes, and Negro physicians and Negro medical quacks. The Pullman porter may play the role of humble servant for the white passenger, whatever the passenger's status in white society, but in the society of Negroes he is a man of substance and will demand of his inferiors the same humility that the whites demand of him.

Social Organization and Intrasocial Differentiation.—No organization can exist without some sort of distinction arising between the various

individuals who are incorporated into that organization. Children playing in a random, individualistic fashion on the school playground are relatively undifferentiated insofar as this particular situation is concerned. Each does more or less as he wants; he swings on the rings, slides down the chute, jumps rope, or whatever. But the moment that the children become organized, to play a game of baseball, for example, they assume a variety of special and related roles that make them different from one another. Some join one team, some the other; one becomes a pitcher, another a catcher, etc. Inequality—*i.e.*, intrasocial differentiation—is thus the obverse of social organization.¹

Intrasocial differentiation is of two orders: that which arises from the organization of many units of the same type, such as families, tribes, clans, or feudal units; and that which arises from what is initially a division of social functions among the members of society at large, *i.e.*, class, occupational, rural-urban, regional, and sex differentiation. Within a relatively stable social system, each intrasocial grouping is functionally articulated with all the others and an equilibrium of sorts exists between the various groupings. Under conditions of social change, however, this equilibrium is disturbed, even as the functional effectiveness of an institutional or other mode of organization is disturbed; and the various groups within the society are set into competition or more or less violent conflict with one another. The decline of institutional forms of organization has considerably lessened the importance of differentiation on the basis of institutional units; interfamily relations, including feuds, are, for example, very much a thing of the past. The present chapter will therefore deal with the second order of intrasocial differentiation; for as the relationships between families and other organizational units have receded in importance, those between classes and between regional, occupational, and comparable groups have become of greater significance.² Competition and conflict between groupings of this order are significant aspects of contemporary life.

¹ The numerous attempts that have been made to establish a society in which all the members would be equal and socially equivalent have failed. The latest and most massive of these was that of early postrevolutionary Russia. It was proposed that each citizen be given material and other satisfactions according to his needs and irrespective of his contribution to the social whole. In this way it was hoped to achieve the "classless" ideal of Marx. That goal was soon abandoned in favor of effective economic, political, military, and social organization, which could not be developed without at the same time creating marked differences in income and status among various individuals and groups.

² For a recent study of the general phenomenon of intrasocial differentiation, see E. L. Anderson, *We Americans: A Study of Cleavage in an American City* (Harvard University Press, Cambridge, 1937). A variety of materials in addition to those that will be cited on the following pages will be found in Supplementary Bibliography 15.

CLASS DIFFERENTIATIONS

Every society has some sort of class hierarchy, and upon the effectiveness of this hierarchy as a mode of over-all organization depends in part the efficiency of the social system. The class structures of modern societies are ill-defined and exceedingly unstable, and the various classes are not functionally articulated. They work much at odds with one another, and upon occasion they come into overt and destructive conflict. Many of the events of recent social history—strikes and lockouts, political dissensions, and riots and revolutions—have arisen from the inability of existing class groups to cooperate; and these conflicts reflect the constant, and perhaps increasing, disequilibrium of the various class structures. Every class structure today is a hodgepodge of many old and some new organizational elements, a functionally ineffective system incapable of meeting the needs of modern methods of production and other features of contemporary life.

Social Classes.—A social class is a culturally defined group that is accorded a particular position or status within the population as a whole.¹ The factors that determine what constitutes a class are matters of social definition, and they may change, as they have in recent centuries, through time. Class status involves some special combination of social privileges and, normally, of equivalent obligations. The privileges may consist of the owning of productive properties, the exercising of certain skills, various political or religious prerogatives, or the like. These privileges, whatever they are, largely determine the standard of living and the way of life of the members of each class. The upper class (or classes), for example, is released from manual labor (its members are masters rather than servants); it is ordinarily highly rewarded in material ways (its members live in the castles rather than the huts, eat the choicest foods, and have leisure for the "better things of life"); and it is usually accorded a high level of esteem. In modern societies a fairly close relationship exists between economic and social status, the former being the most important single factor in the determination of the latter. Economic status and social position have not, however, always been directly related. The industrious merchant of premodern China, for example, was rewarded with a high material return but was accorded little esteem; merchants constituted the next-to-lowest class in terms of prestige, being just a shade above soldiers. The scholars, on the other hand, constituted the highest class in terms of social prestige, although they were not very well rewarded in material terms.

¹ For a discussion of the concept of class and materials on some contrasting class systems, see P. Mombert, "Class" (*Encycl. Soc. Sci.*, vol. 3, pp. 531-536). For further analysis of the concept of class, see G. Simpson, "Class Analysis: What Class Is Not" (*Amer. Sociol. Rev.*, vol. 4, pp. 827-835, 1939).

The members of each social class constitute something of an in-group. They recognize one another as social equals and distinguish in a variety of ways between themselves and the members of other class groups. Most of their associations, and usually all of their intimate associations, are with members of their own class. The feudal lord might speak to the humble serf; but he ate, drank, and lived with fellow aristocrats. The modern middle-class professional man may serve rich and poor alike; but he probably lives in a middle-class neighborhood, vacations in a middle-class summer resort, travels "middle class," and belongs to a middle-class club. Because they have the same order of social rights and tend to "live" together and apart from the other classes, the members of each class develop their own peculiar customs, conventions, and ideologies; and they may even speak in a distinctive way. The people who lived in the manor house, for example, were distinguished from those who lived in the village, not only by the fact that they lived in the manor house but also by the fact that they behaved in ways that were different from those of the villagers. Each social class is, in a sense, a society within a society. But unlike a true society, a social class is in no way complete or independent. Its existence depends upon the other classes, inferior or superior. Unless there are serfs, there can be no lords; unless there are servants, there can be no masters; unless there are industrial workers, there can be no managers of industry.

The number of classes, the differences in status and conduct of the classes, and the relations of the classes vary considerably from society to society. In some societies, such as the feudal society of western Europe, there have been two major and widely separated classes. In other societies, notably those that are tribal in character, class lines are vague and the differences between the classes are small. Most modern Western societies have a confused, multiple-class system, with great disparity between the status of the top and bottom classes but almost infinite gradations in status between these two extremes. Modern class systems are, moreover, so exceedingly dynamic that class affiliation is both vague and ever-changing. Today it is a wise man who knows the social class to which he belongs and a rare one who is content to stay there.

Functional Basis of Class Differences.—All class differentiations presumably began as or grew out of a social division of labor. The division of labor between classes is a large and complex parallel to the division of labor between men and women in the old family system or the division of labor between the captain of a ship, his subordinates, and the crew. In a functionally effective class system there is a fairly equable exchange of goods and services between the several classes; and the rewards, material or otherwise, that each individual secures as a member of his particular class are a fair measure of his contribution to the welfare of

the society as a whole. Among the Plains Indians, for example, the tribal braves had the best of everything the tribe had to give and did not do "degrading" manual work. But in return for their high status they risked their lives in hunting game upon which the entire tribe was dependent and in fighting tribal enemies. As a class, the feudal serfs were as necessary to the lords as the latter were to the serfs; but there were many serfs for each lord; hence, in theory at least, the contribution of each serf to the welfare of the manor was much smaller than that of any member of the lord's family. Under any one of the various functionally effective landlord-tenant systems, the landlord normally serves as the director of tenant agricultural practices, the keeper of records, the magistrate who settles quarrels between the tenants, etc. His high status is thus a reflection of the fact that his services are vitally important to the maintenance of the system, while the services of any one of the tenant farmers is by comparison far less important. ✓

The Leisure Classes.—Like all other things social, a class may lose much or all of its functional significance. Insidious changes within the class system itself may permit a class to enlarge its prerogatives and at the same time reduce its contribution to the society as a whole; the social elite, for example, may degenerate, growing lazy and irresponsible. Or changes external to the class system, such as technological developments, may deprive a class of its functional significance but leave the members, for a time at least, with many of their privileges. This is what happened to the feudal aristocrats of western Europe during the Middle Ages, when new techniques, new modes of production, and new forms of social organization devaluated the feudal system and stripped the feudal lords of their social functions. This same sort of thing has been happening in an even more complex way to some segments of the laboring class of American society. As economic developments have deprived these segments of their work role, they have become in one way or another wards of the society.

A class, high or low, that has for whatever reasons lost its functional significance but retains some or many of its privileges is a leisure class. The term "leisure class" is often applied to those functionless groups who because of their class position have the wealth to enjoy their leisure; but it is just as applicable to all who are supported by society but do not in turn contribute to the production of social satisfactions. Beggars do not live in the manner of the idle rich; but in many societies they secure as a group as much from society as do the idle rich because as a group they are more numerous.¹

¹ See H. W. Gilmore, *The Beggar* (University of North Carolina Press, Chapel Hill, 1940).

Every society has one or more groups that are supported in idleness, just as it has some customs and traditions that are perpetuated for no better reason than that they were once useful. The maintenance of any such class, large or small, is at the expense of the socially productive members of the society. A small leisure class may be worth its cost; for, although the members make no tangible contribution to the society, they may, as do the pseudo nobility of contemporary Britain, give a certain representation to the dreams of the working members. Every society, it has been said, should have its well-dressed aristocracy, presumably to give the commoner something to look up to. And perhaps every society should have its shabby parasites also, to give the commoner something to look down on. But whether or not it is worth its cost, every leisure class, rich or contented poor, has a vested interest in the maintenance of things as they are; and when the leisure class constitutes a relatively large proportion of the population, as it does in some contemporary societies, it is a powerful force for the perpetuation of those forms of social disequilibrium that have given it leisure and the privileges whereby it lives on the labors of others.

Closed Classes and Individual Inertia.—However it may have originated, a class system tends in time to become institutionalized; each of the several classes becomes accommodated to the others, the class lines grow increasingly sharp, the differences between the classes grow wider, and the membership of each class becomes fixed. The ultimate in the institutionalization of a class system is a hierarchy of closed classes, admission to which is by birth only. Under these conditions the social population is fully and permanently stratified. The individual's status is determined by the class status of his parents, so that what he as an individual does has little bearing upon his position in the social hierarchy and hence upon the share of social benefits that he receives. Whether he pays for what he receives by fulfilling the obligations of his class then depends upon the functional effectiveness of the system itself. The feudal lord was born to his high estate, and the serf was born to his humble position. When the feudal system was a going concern, most feudal aristocrats no doubt contributed *quid pro quo* to the maintenance of the manor. The fact that they were born into the aristocracy then meant that they would most likely be trained into the obligations as well as the privileges of that class. But when the aristocracy lost its functional significance, those born to it were automatically granted rights for which they paid nothing in return.

Whether functionally effective or not, a system of closed classes makes for a lethargic and stable society. For where status is determined at birth and cannot be either lost or improved by the actions of the individual, there is little encouragement to exceptional endeavor. The members of

each class may maintain the level of endeavor required by their class position. Few will do more than is so demanded of them, and some will do less. Whether he worked or played, the aristocrat remained an aristocrat. No matter how hard he labored, the serf could not escape serfdom. The members of an hereditary class group may find occasion to exert themselves in war, as did the feudal lords, or in some other socially unprofitable outlet; but they will have little incentive to exceed the class norm in productive endeavor. It was in part because of the closed character of the feudal class system that feudal society remained for so long on such a low level of social well-being. Likewise it is in part because of the closed character of the many classes in contemporary India (some of which were in origin distinctive ethnic groups) that the peoples of India are so lowly motivated and the society as a whole so inert and apathetic. Until the class barriers are fractured and it becomes possible for a man of lowly status to profit by individual effort, such effort will not be forthcoming. And until that time the members of the privileged classes will continue to enjoy their leisure, for they need not work and will not do so.

Open Classes and Individual Initiative.—An open class system, on the other hand, makes membership in the upper class ranks a matter of competition and thus encourages individuals and families to exceptional endeavor. The open class system is therefore generally associated with a fairly high level of endeavor on the part of the whole social membership. This does not mean, however, that the society is necessarily subject to constant change. In premodern China the classes, except for the relatively small nobility, were open. A peasant boy could rise by his exceptional scholarship to the class of mandarins, and a rich merchant could carelessly dissipate his wealth and become a common coolie. As a result there was a constant struggle of lower class individuals and families to rise in the class hierarchy and of higher class individuals and families to maintain their status. But initiative was so canalized that it led to more endeavor rather than to culturally disturbing innovations. The openness of the classes in postfeudal Western societies, on the other hand, was one phase of the dynamics of these societies. Competition for admission to the upper class ranks was not entirely canalized, and the individual could upon occasion improve his class status by invention or discovery. Thus the openness of the classes was an important factor in promoting inventions and discoveries.

In an open class system admission to membership in the higher class groups depends in part, although never entirely, upon what the individual does to earn the approval of the other members of society. What will earn such approval depends in turn upon the character of the society itself. In some primitive societies a man's social status depended upon

his skill at hunting or his prowess as a warrior. Since in modern societies social status is determined in part by material wealth, the man who hammers his way from poverty to riches thereby rises in the class hierarchy. In the process of rising in the social scale he may displace some of those who were born to positions of wealth and prestige but were incompetent and incapable of retaining the status that they had inherited.

The openness of classes is always limited by the fact that status at birth limits the opportunities of those born into the lower classes to acquire the credentials, educational, monetary, and otherwise, that are necessary for admission to a higher class, while those born into the higher classes acquire these attributes more or less automatically. The present American class system is perhaps as open as that of any contemporary large society. (Some contemporary primitive societies have more open systems.) Nevertheless, an individual born into a laboring class family starts with a tremendous handicap in comparison with one who is born into an upper class family. He inherits poverty, ignorance, low motivations, and a low status from which he must rise if he is to be a member of a higher class, whereas the individual born into an upper class family inherits wealth, educational opportunities, strong incentives, and a status that needs only to be retained if he is to be a member of the upper class.

✓*Class Ideologies.*—An established class system is supported by an ideology that in one way or another justifies the existence of the upper class or classes, the disparity between the standards of living of the upper and lower classes, and the mechanisms by which the individual acquires his class status. The ideology of a closed system often relates class position to the will of God or the gods; and when it does, the class structure and the religious organization of the society are directly interdependent. In such instances the priests are the advocates and ideological defenders of the hereditary aristocracy, and they use their religious influence over the lower classes to keep the members of those classes content with their lot. It was this specific function of religion that led the Marxian socialists to decry all religion as an opiate of the people. Religious sanctioning of hereditary class status exists today among the peoples of India, among most of the peoples of the Near East, and in Japan. It was characteristic of the peoples of western Europe during the feudal period and on into the Middle Ages; and until the revolution of 1917, the Russian Orthodox Church and the Russian aristocracy were inseparably interwoven.

Open class systems, such as that of premodern China, have usually been justified on utilitarian grounds; and there is a distinct tendency today to try to find utilitarian reasons for the class differentiations that exist in Western societies. Thus the current justification for the exceed-

ingly high income of certain elements of the upper economic class—managers of industry, motion-picture stars, etc.—is that the prospect of exceptional material reward is necessary to induce the greatest possible endeavor. This utilitarian argument is, however, considerably blunted by the fact that wealth and class position are still inheritable. In order to justify the inheritance of class status, ideologists have been forced, as will be indicated later, to revive and adapt the Aristotelian idea of the biological origin of social superiority and inferiority.

Social Mobility.—The ideology of an open class system not only justifies the system but defines the ways by which an individual may rise in the class hierarchy. These ways reflect the basic social values of the society, for the individual who moves up the class scale is thereby being rewarded for what is deemed socially desirable behavior. The most approved means of social advancement in premodern Chinese society was scholarship, the nature of which was rigidly defined. In western Europe during the latter Middle Ages the priesthood was the easiest ladder by which to rise in the social scale. Today, as for a century and more, business enterprise is the main way by which the individual born into obscurity can rise to fame and fortune.

Wherever there is the possibility of individuals or families rising in the class hierarchy, there is also the possibility of movement in the reverse direction. Thus if it is possible for a man to rise in the class scale by marrying above his class, it is also possible for a girl who marries beneath her class thereby to go down the scale to some extent. If a man can raise himself and his family up the class scale by earning or otherwise securing material wealth, then it is also possible for his son to move the family back down the scale by dissipating the family wealth.

Movement of individuals and families up and down the class hierarchy is termed "social mobility."¹ The rate of mobility depends in the first instance upon the degree to which the class system is open. (In a closed system, of course, the rate is nil.) The rate is also influenced by a variety of external circumstances. Social disturbances of any sort tend to increase the rate of mobility. A modern war, for example, provides unprecedented opportunities for sergeants to become officers, for small businessmen to become big businessmen, and for small-time crooks to grow rich on "black-market" operations. It also deprives many persons of their class status, particularly those who live on fixed money incomes. Where, as in the modern world, wealth is a means to higher class position and an important requirement for class membership, any event that increases or decreases the opportunities to secure wealth affects the mobility rate. The discovery of new lands, for example, makes possible an increase

¹ See P. A. Sorokin, *Social Mobility* (Harper, New York, 1927).

in the number of landowners and, under some systems, of landed gentry. The discovery of a new source or new kind of wealth, such as the eighteenth-century discovery of the potentialities of coal, may in itself create a new class of the newly rich who gradually blend into the class of the old rich. Conversely, any contraction in a source of wealth may ruin some members of the upper class and force them down the social scale. Thus while the discovery of oil under Oklahoma lands has pushed many farm families up into the wealthy class, exhaustion of these oil reserves will deflate all those whose position is dependent upon a continuation of revenue from them. A change in industrial demands or techniques or a shift in industry from one region to another will give class advancement to some individuals and families and force others down the class scale. The movement of the cotton industry southward from New England, for example, lowered the incomes and thus in time the social status of many old New England families. Likewise the coming of the automobile ruined many proud families who had been firmly established on the carriage and harness trade. Into their places moved the families of those who rose to wealth along with the growth of the automobile industry.

The Circulation of Elites.—In a dynamic society the classes are open, and there is a constant movement of individuals up into and down from the upper class ranks. Those who go up do so because they happen to possess in unusual degree the particular attributes required for success under the circumstances of the moment; those who go down do so because the attributes they possess have for the moment lost value. Initiative of some sort is required of those who would go up or stay up in the class hierarchy; but the particular kind of initiative that gives class advancement will vary from society to society and from time to time within the same society. During times of revolutionary chaos, for example, it is those who are politically ambitious and ruthless who are most likely to survive and succeed, whereas in tranquil times personal charm or business ability are more likely to bring success. During the 1920's in the United States only those politicians who were identified with the Republican Party had any considerable chance for political advancement; the decade following, on the other hand, was favorable to Democratic politicians and decidedly unfavorable to those of Republican affiliation. During the German occupation of France those individuals who were capable of collaborating with the enemy were most likely to succeed, whereas upon the liberation of France from German rule having been a collaborator meant eviction from the ranks of the upper classes.

The changes over time in the personnels of the upper economic and political classes have been described as a circulation of elites.¹ This cir-

¹ The concept of the circulation of elites was used to explain the mechanism of social change by V. Pareto in *The Mind and Society* (translated by A. Livingston

culuation of individuals into and out of the ruling classes is one of the important mechanisms of social change. It is not, however, a simple and continuous process. The members of an established elite do not always as individuals give way to the claims of the more ambitious, the more enterprising, and the more ruthless aspirants from the lower classes. On the contrary, as an in-group they tend to resist the attempts of outsiders to gain access to positions of leadership. To the extent that they are successful, they not only prevent the entrance of "new blood" into their ranks but also retard the social changes that a free circulation of elites would implement. The result is a shift from individual competition for social status—from competition between the rich man and the one who strives to become rich or between the political leader and the candidate for his office—to class conflict. Conflict of this sort is quite as characteristic of contemporary societies as is the constant circulation of elites, which may reflect and further gradual social changes.

SOCIAL CHANGE AND THE CLASS SYSTEM

The class systems of all contemporary Western societies are undergoing constant modification; and the classes, such as they are, are to a considerable degree open. Mobility up and down the class hierarchy is fairly common, although the rate varies from system to system and from time to time. The upper classes everywhere struggle to solidify and perpetuate their position and, as a consequence, are in constant covert conflict both with individuals who are trying to gain entrance into their ranks and with lower classes that are discontented with the class system itself.¹ From time to time conflict between the classes becomes critical, new political parties come into existence, mass movements arise, or violence breaks out between the representatives of one class and another. Nothing that will be wholly true or true for very long can, therefore, be said concerning the nature of the class groupings in modern societies.²

and A. Bongiorno, Harcourt, New York, 1935). For more recent discussions of the nature and role of the social elite, see M. W. Beth, "The Elite and the Elites" (*Amer. J. Sociol.*, vol. 47, pp. 746-755, 1942); E. M. Doblin and C. Pohly, "The Social Composition of the Nazi Leadership" (*Amer. J. Sociol.*, vol. 51, pp. 42-49, 1945); H. Goldhamer and E. A. Shils, "Types of Power and Status" (*Amer. J. Sociol.*, vol. 45, pp. 171-182, 1939); G. Mosca, *The Ruling Class* (McGraw-Hill, New York, 1939); and C. W. Mills, "The American Business Elite: A Collective Portrait" (*J. Econ. Hist.*, Supplement V, pp. 20-44, 1945).

¹ See A. W. Kornhauser, "Analysis of 'Class' Structure of Contemporary American Society—Psychological Bases of Class Divisions" in *Industrial Conflict: A Psychological Interpretation* (G. W. Hartman and T. Newcomb, eds., Cordon, New York, 1940); and B. Moore, Jr., "A Comparative Analysis of the Class Struggle" (*Amer. Sociol. Rev.*, vol. 10, pp. 31-37, 1945).

² For material on the class structure of contemporary American society, see O. C. Cox, "Estates, Social Classes, and Political Classes" (*Amer. Sociol. Rev.*, vol. 10, pp. 464-469, 1945); J. W. McConnell, *The Evolution of Social Classes* (American Coun-

This confusion of class organization can be understood only against the background of the technological and other changes that have brought it about.

The Feudal Heritage.—Between the two classes of feudal society there was a small intermediate and nonhereditary group of artisans, fighters, and household servants who had special privileges growing out of their association with the lord and his family. The members of this group were, however, serfs by birth and by group attachment; so that there were in actuality but two class in-groups. Marriage between the members of these two classes was taboo, and there was no way by which a serf could rise into the nobility. Outside the feudal unit and not included in the feudal class system were the inhabitants of the few towns that had survived from the prefeudal Roman period. Within these towns class distinctions depended largely upon wealth, but the economic life of the towns was so much depressed and so static that few men born into poverty ever rose above it.

From the feudal class system European societies have inherited some of the trappings of a feudal aristocracy, a feudal landholding pattern, and a tendency to consider the inheritance of class status a normal if not divine right. In many European societies, there has not yet occurred a breaking up of ancient feudal estates. The "landed gentry" of Britain, for example, are either descendants of feudal lords or men who have secured the lands of such descendants by purchase or Crown grant. And along with the ownership of large estates there still goes a class position that might be described as quasifeudal; the tenant doffs his cap to his landlord, even as the serf did to his feudal lord. In some of the more backward regions of Europe, such as Greece and Italy, where industrialization has been most delayed, the owners of large estates still constitute a closed class that is generally able to dominate in political matters and thus to keep the peasants in their place. Indeed, in both Greece and Italy and to a lesser extent elsewhere the ownership and operation of even industrial establishments has tended to take on feudal characteristics, the industrial overlords and the landed gentry working hand in hand to prevent anything, such as public education, that might lead the working masses to become disgruntled with the *status quo*. As a consequence, in these societies feudal class organization has not really been displaced; it has only changed character. There continue to be two main classes, very rich and very poor, whether of the town or country, and slight movement between the two.

In western Europe (Germany to an extent excepted), in the British

cil on Public Affairs, Washington, D. C., 1942); C. H. Page, *Class and American Society* (Dial Press, New York, 1940); and W. L. Warner and P. S. Lunt, *The Status System of a Modern Community* (Yale University Press, New Haven, 1942).

Isles, and in such new lands as America new classes have, however, arisen; and the old feudal class system has persisted only in the most fragmentary form. Of those fragments the most important is the feudal idea of the divine right of the aristocracy to rule, an idea which, with the decline of religious ideology, now appears as the biological interpretation of class differences. Like the feudal concept, the biological version of class differences vests in the members of the upper classes a special and irrevocable "right" to rule.

✓ *The Rise of the Middle Class.*¹—The decline during the eleventh century in the importance of the feudal unit and the growth of new economic opportunities in the towns drew many serfs away from the disintegrating feudal manors and increased the numbers of craftsmen and traders. These townsmen were free men who belonged to neither of the two feudal classes. In time, as has been indicated, they organized themselves into guilds and thereby more or less closed their ranks to the serfs who subsequently came to the towns. These later arrivals tended to form a distinct and underprivileged class, politically free but economically dependent upon being employed as laborers. The prospering guildsmen, the Jewish financiers, and such professional men as lawyers, doctors, and scholars then became a "middle" class. Their status was far above that of common town workers and rural peasants; but they were nonnoble; *i.e.*, they had not been born to the feudal aristocracy.

The unification of feudal Europe under monarchs was in general welcomed by this urban middle class, since it meant, among other things, safe conduct on the roads and, therefore, better trade. Ultimately, however, a conflict of interests developed between the more prosperous and economically powerful members of the middle class and the political rulers, who were mainly of the nobility and far too conservative for the new economic elite. The struggle of this new elite, men of business and finance rather than of noble lineage, to secure political status commensurate with their economic position was the conditioning factor in the social history of eighteenth-century western Europe. In this struggle the mass of the middle class generally sided with its most prosperous members, while the lower classes generally sided with the king and his nobles. By now the impact of factory technology was beginning to be felt, and to the rural peasantry the landed gentry represented resistance to the industrialization that was destroying their means of subsistence; to the factory worker the king often seemed to offer protection from the avaricious factory owners.

The evolution of the representative system of government and its establishment in one form or another in all Western societies may be

✓ ¹For a detailed analysis of this phase of social history, see A. Von Martin, *Sociology of the Renaissance* (Oxford University Press, New York, 1945).

looked upon as the legalization of the middle class. That form of government gave to the middle class a voice vote in the conduct of state affairs, and for more than a century the middle class held the balance of political power.

The Capitalist Class.—With the establishment of representative government, the hereditary aristocracy, with the exceptions previously noted, ceased to be an important element in the Western class system. Their place as the political elite was in the main filled by the new economic elite, usually described as “capitalists.” The new economic elite has generally exercised its political power not by taking office, in the manner of kings, but by control of the professional politicians who are elected to office by popular vote but who, until recently at least, have usually served in the interests of big business.

Capitalists have never constituted a clearly defined class grouping, as did the hereditary aristocracy whom they displaced. Although they have in many ways continually endeavored to close their ranks and to solidify their position, a variety of circumstances has operated to keep the class group somewhat open and to work changes in the character of the class position itself. For one thing, technological and other changes have constantly brought new members into their ranks and taken old members out. For another, the class has consisted mainly of highly aggressive individuals who have been prone to put their personal interests and ambitions above the interests of the class as a whole. This lack of class *esprit de corps* has been particularly notable in America, and perhaps least evident in Britain, where industrialists and large estate owners have been able to maintain something of a united front against attacks upon the class system.

Over the past century two sets of opposing forces have operated to modify the characteristics of the capitalist class itself. On the one hand the developments in productive technology, in transportation, and in trade practices have given an increasing advantage to large enterprises; big businesses have grown bigger and have displaced the small independent businessman. The middle-class merchant, manufacturer, or farmer has often been forced to give up the struggle for economic independence and to become a hireling of the large enterprise, thereby adding to the power of the capitalist rather than competing with him.

Offsetting to a significant degree this concentration of economic power in the hands of the elite has been the growing strength, first through the development of labor unions, of organized labor. Within the past fifty years the labor movement has entirely upset that balance of political forces that formerly made the middle class a sort of buffer between the upper and lower classes. Today the middle class is a more or less passive

bystander in a conflict between the upper class representatives of predatory capitalism and a militant laboring class.

The New Middle Classes.—At the opening of the nineteenth century, when the movement toward the establishment of representative governments was beginning to have effect in Europe, the middle class, composed largely of tradesmen and goods processors, was fairly homogeneous. As the industrial revolution progressed, the middle class began to break up into many groups, and the status of the class as a whole began to change. Today the middle class is a heterogeneous and ill-defined class, with uncertain interests and rather indeterminate relationships with the other classes. An even greater multiplicity of groups within the middle class has come about in recent years through the addition of new kinds of members who belong, to a degree at least, to the broad category "middle class" but who differ in some salient respects from other members of that class. The continuing growth of technology has made for a constant increase in the number of men who serve society as technicians—doctors, engineers, architects, etc. The development of systems of public-school education and the rise of science have increased the number of scholars, teachers, research men, etc. The development of the newspaper, radio, motion picture, and other new mediums of communication and of the comparable new mediums of transportation has riven rise to such varied workers as journalists and motion-picture actors. Finally, the growth of large-scale business enterprises and the elaboration of governmental functions have made for a tremendous increase in the numbers who make their livelihood by bookkeeping, stenographic, "administrative," and legal work.

All such people—white-collar workers, professionals, and bureaucrats—belong to the middle class by virtue of the fact that they are neither capitalists nor, in the usual sense, laborers. But although they have a common interest in the maintenance of the economic *status quo* and are characteristically conservative about social if not technological matters, they vary greatly as to income, occupational knowledge and interests, and way of life. Some, such as clerks, work for a wage and may be members of labor unions. Others, such as physicians, sell their services on a fee basis and, like those small businessmen and farmers who have survived in competition with larger enterprises, resist every attempt that is made to deprive them of their freedom of action. Except for the independent businessmen and farmers, the members of the middle class are sellers of some special skill, some form of personal service; and they are either directly or indirectly dependent for their income upon the upper class. The dependence of the clerks, journalists, bureaucrats, and such entertainers as those who hire out to radio sponsors is self-evident. That of the physicians, educators, scientists, and engineers is less evident but

almost as great. The physician may earn his livelihood by serving a middle-class clientele; but many of his patients, and indirectly all of them, will earn their livelihood through employment in corporate—*i.e.*, capitalistic—enterprises.

The members of the middle class may be roughly subdivided in terms of income and standard of living into an upper, a middle, and a lower middle class.¹ The upper middle class tends to identify itself directly with the upper class, and the lower middle class with the middle middle class. Thus the exceptionally successful lawyers and physicians are likely to strive for acceptance into the company of industrialists; and the clerks and the petty bureaucrats are inclined to see themselves as, or to try to make themselves, the respective equals of the store managers and the bureau chiefs, *i.e.*, to gain entrance into the ranks of the middle middle class. This latter class, composed of the successful small merchants, manufacturers, and farmers, of the better-paid governmental personnel, of technicians, educators, and scientists, and of the majority of lawyers and physicians, are somewhat distinct from both their class inferiors and class superiors in that they are relatively complacent about their class position and strive only to maintain it.

The Laboring Class.—In spite of the fact that the middle class has grown relatively in numbers over the past century and a half, the majority of the members of contemporary Western societies still secure their livelihood by physical labor. The industrial revolution greatly modified the character of the work of the world, but it has not yet eliminated the need for workers. Men must run the machines that mine coal and ores, that process metals, and that fabricate from them the machines that other men run in the cultivation of the soil, the transport of goods and persons, the construction of buildings, etc. All those who run machines and who do work not yet mechanized (servants, commercial fishermen, truck gardeners, and others who use their strength more than their brains) constitute a vague class whose members have in common a hand-to-mouth existence and continual insecurity. Beneath this class of workers is the impoverished leisure class, made up of those who through ineptitude or circumstances have become dependent upon charity, public or private, and live without earning a living.

The members of the laboring class vary by imperceptible degrees from the economically marginal day laborers and tenant farmers to the skilled artisans, such as mechanics, carpenters, masons, and steelworkers. Although the latter secure a premium for their skills, the circumstances of their employment are much like those of the semiskilled factory workers, truck drivers, etc. In general, the upper ranks of the laboring class receive

¹ See C. Brinkmann, "Bourgeoisie" (*Encycl. Soc. Sci.*, vol. 2, pp. 654-656); and A. Meusel, "Middle Class" (*Encycl. Soc. Sci.*, vol. 10, pp. 407-415).

a higher daily wage than do members of the lower middle class. Mechanics are usually paid more per day than are clerks, bookkeepers, stenographers, and other white-collar workers. The total life income of the lower middle classes, however, is generally much above that of the upper lower class, whose employment tends to be irregular and whose working life is normally short.

On the whole the standard of living of the laboring class has risen sharply as a consequence of industrialization and the thousand and one changes related to industrialization. The mechanization of work has considerably lessened the physical strain upon workers. Sanitation, modern medicine, and improvements in food preservation and processing today permit even the common laborer to enjoy a better diet and better health than any people have ever before known. The control that men now exercise over their birth rate has helped keep down the numbers of workers and thus has somewhat offset the continual substitution of machines for workers. All in all, the laboring classes of today live better and work less than did the commoners of any society of the past. The average laboring man, certainly the average laboring man of America, has in fact a considerably higher standard of physical welfare than had the lord of the medieval manor.

CLASS CONFLICTS AND ACCOMMODATIONS

The fact that the laboring classes of today are better off than were comparable classes in the past has not, however, made the laboring classes of today content with their status. Since early in the industrial revolution there has been continuing competition among the members of the laboring class for the jobs that were available (just as there has been competition between business enterprises for markets for their goods). Moreover, there has been recurrent and intensifying conflict of the class as a whole with the middle and upper classes. This conflict and the disequilibrium of the class system that it reflects have done much to keep the level of social productivity well below the potentials of modern technology.

The Labor Movement.—The status that a class enjoys is a relative matter; and although the laboring classes have profited considerably by the industrial revolution, they have not gained anything like as much as have the middle and upper classes. The economic gap today between the laboring and the upper class is far greater than was that between the medieval serf and lord. Moreover, the serf, although traditionally in bondage to his lord, had rights as well as duties, while under *laissez faire* the laborer has no rights and the capitalist no duties. This latter circumstance is the major reason why the laboring class has lacked economic security. Until recently, the ownership of productive property did not

entail any obligation to those who were dependent upon its continued operation. The capitalist was, in general, free to hire and fire workers as he saw fit; and if he wished, he might withdraw his properties from production. Workers, on the other hand, could secure work only when it was offered, although they had to work in order to go on living.

Whatever security the laboring classes of modern societies now possess—and it is none too much—has been won by them at great cost to society at large and in spite of the best efforts of the employing class. Occasionally a large employer of labor has felt a paternalistic obligation to see to the welfare of his workers; but in spite of much talk by economists of the “enlightened self-interest” of employers, such an employer has until very recently been the rare exception. For, as was indicated earlier, it is inherent in the free-enterprise system that competitive business strive to lower prices and raise profits by securing the cheapest possible labor and by obtaining from that labor the greatest possible return.

Since the beginnings of the industrial revolution in England, there have been sporadic efforts on the part of labor to secure a larger share of the wealth that it helped produce. Early efforts were generally in the nature of rebellious rioting, the burning of factories and other forms of sabotage, and the attacking of police and other functionaries of government who represented law and order, *i.e.*, who were defenders of the rights of private property. After a century and more of such intermittent and generally fruitless protest against the *status quo*, some elements of the laboring class developed sufficient in-groupness to abandon competing with one another for jobs and to engage in systematic and organized conflict with their employers. The form of organization that evolved, trade-unionism, has been discussed in another connection.

The almost universal reaction of employers to the unionization of labor was antagonism. In theory, the union was not a threat to the existing class system; it was simply an application to the sale of labor of the same principle that employers applied to the sale of goods—*i.e.*, give as little and get as much as possible. But employers considered the union movement a threat to their status and fought the unions with everything at their command, including employer-dominated police and legislators. Unionized workers fought back with strikes and boycotts and property sabotage, with “slow-ups” and “feather-bedding,” and with a variety of other devices, some of which helped labor to secure higher wages and others of which reduced what labor gave in return for whatever wage it secured.¹ For many decades “labor trouble” was normal in all those industries in which workers had succeeded in establishing strong unions.

¹ For discussions of recent and current conflicts between labor and capital, see W. H. Crook, *The General Strike* (University of North Carolina Press, Chapel Hill, 1931); J. I. Griffin, *Strikes: A Study in Quantitative Economics* (Columbia University Press, New York, 1939); E. T. Hiller, *The Strike: A Study in Collective*

Limited Accommodation.—Conflict between worker and employer results in some loss to everyone, for production is thereby curtailed. Over the years the employing classes came slowly to accept the inevitability, if not the desirability, of labor organization; and conflict between labor and capital now tends to be less violent and more contractual. As organized labor gained political power, the state came to assume a somewhat neutral, if ambiguous, position toward the conflict; and in the United States various legal mechanisms for the arbitration of disputes between unions and employers began to be established. These developments constitute a limited accommodation between these two classes.

By now many employers and even some labor leaders have come to the view that labor and capital are not inherently opposed but have, in reality, a common interest in securing for their industry as large a share as possible of the total national income. This view is perhaps more characteristic of industrialists and labor leaders of America than of those of Britain or the Continent, a fact that underlies the occasional statement that the United States is the sole remaining capitalistic nation. It must not be supposed, however, that even in America anything like a functionally effective organization of the various classes has yet been achieved. The working out of what organization there now is has been a process so laborious, so slow, and so subject to regression that many social theorists consider unionization and its consequences only a palliative. The cure for the inequities and inefficiencies of class organization lies, they believe, in a socialistic modification of the system of property rights and ownership upon which the present class structure is founded. It is certainly true that labor unions have often secured their gains by monopolistic restrictions on the labor supply, to the disadvantage of society at large, and that at times the harmony, such as it is, between union and employer smacks of a conspiracy against society as a whole.

Ideological Factors.—As will be indicated in the concluding chapter of this book, the ultimate in class conflict is revolution. The middle-class revolutions of the eighteenth and nineteenth centuries, whereby representative governments were established in America, England, France, and other countries, have long since run their course.¹ The present century

Action (University of Chicago Press, Chicago, 1928); L. Huberman, *The Labor Spy Racket* (Modern Age, New York, 1937); A. Lindsey, *The Pullman Strike* (University of Chicago Press, Chicago, 1943); S. H. Patterson, *Social Aspects of Industry: A Survey of Labor Problems and Causes of Industrial Unrest* (McGraw-Hill, New York, 1943); and J. J. Senturia, *Strikes* (University of Chicago Press, Chicago, 1935).

For a broad sociological analysis of past and present employer-employee relations, see W. E. Moore, *Industrial Relations and the Social Order* (Macmillan, New York, 1946).

¹ The revolutions that occurred in Italy, Germany, and Spain between the First and Second World Wars were counterrevolutions in which the upper classes en-

has given rise to a new revolutionary movement, one in which elements of the laboring classes strive to remake the class system to serve their interests, even as the middle classes remade to their advantage the class systems that had given vast prerogatives to useless aristocracies. The dominant ideology of revolutionary labor is communism, a doctrine that is derived directly from Marx. In its pure form the ideology of communism calls for the elimination of inequalities in income between the members of society, which would mean the elimination of class differences. In its operative form, as in contemporary Russia, communistic ideology has become almost indistinguishable from state socialism.¹ Both envision the substitution of public for private ownership of productive properties—agricultural lands, natural resources, industrial plants, etc. Under public ownership and management the distribution of economic rewards would become, the ideologists contend, not equal, but commensurate with the contributions of various individuals to total productivity. Even in utopia there are to be differences in income and in social status—*i.e.*, classes; for even there some men will work hard and display ingenuity, while others will be lazy and unenterprising. What the ideologists seem to have in mind is a fully open class system in which each class is functionally articulated with the others to the end that each class gets from society what it contributes to it, and in which each individual will initially have the same opportunity to learn to give all that he is inherently capable of giving.

The classical economists, ideologists of the free-enterprise system, have held out the same objective. But they contend that this objective can best be realized under the system of private property and through appeal to the "profit motive." In support of this thesis they have maintained that the distribution of wealth under capitalism is a fair measure of the social worth of each of the several classes. To explain away the obvious fact that under capitalism wealth often goes to those who are born into the right families rather than to those who have worked hardest, they have revived the biological interpretation of class differences, which is just another version of the old feudal belief in the divine right of the feudal lord.

The biological interpretation of class differences is the class counterpart to the racial version of ethnic differences. It locates in hereditary factors the causes of differences in class position and in class characteristics. Some men are, in the words of Aristotle, born to be masters, and

deavored to regain losses that they had suffered as a consequence of unionization and the trend toward socialism. The Russian class system was semifederal right down to the revolution of 1917.

¹ Socialistic theory and the trend toward socialization of industry was considered in Chap. XV. For a brief analysis of the antiunion aspect of socialistic theory, see L. L. Lorwin, "Class Struggle" (*Encycl. Soc. Sci.*, vol. 3, pp. 538-542).

some are born to be slaves. The modern defenders of the class *status quo* have simply changed this to read, "Some few men are born with attributes that are of great value to society and therefore gain great riches, while most men are of inferior quality and are worth no more than the little that they receive." As proof, there has been advanced a great quantity of evidence indicating that in the main the sons of the upper class are better educated, more competent in economic matters, more ambitious, and wealthier than the sons of the lower class.¹ Such evidence demonstrates the well-known and undisputed fact that members of the lower class rarely rise above the status into which they are born, *i.e.*, that even in the modern world class lines are more closed than open. It does not, however, explain why this is so.

The high income of some of the members of the upper class is undoubtedly an indication of superior ability to do the things that society rewards highly. The self-made man has earned his position, no matter how; and some sons of wealth work as hard and as well as did their fathers and grandfathers before them. But wealth tends to become entrenched and to perpetuate itself; and many members of the upper economic class secure their income and status by right of birth, in the feudal manner, rather than by superior performance. Social rather than biological factors are in such instances the sole determinants of class position. The idea that under a system of free enterprise the best biological stocks have "risen" into the upper economic class and the poorest sunk to the lower economic class entirely ignores the fact that freedom is a relative and quickly extinguished thing and that equality of opportunity to learn the things that make for upper economic class status has been theoretical rather than actual.² As long as men may socially inherit either wealth or the social status associated with wealth, there can be no real equality of opportunity; and there can be no certainty that the upper classes are composed of biologically superior and the lower classes of biologically inferior individuals. The view that class position and biological ability are correlated must be seen as an ideological justification for the maintenance of a class system that has been subjected to attack.

RURAL-URBAN DIFFERENTIATION

Socioeconomic class differentiations are only one of a considerable number of distinctions that occur within the populations of modern so-

¹ References to this subject are cited in Chap. III.

² The social determinants of social position have recently been subjected to very much detailed study by J. Schneider. See his "Social Class, Historical Circumstances, and Fame" (*Amer. J. Sociol.*, vol. 43, pp. 37-56, 1937); "The Cultural Situation as a Condition for the Achievement of Fame" (*Amer. Sociol. Rev.*, vol. 2, pp. 480-491, 1937); "Class Origin and Fame: Eminent English Women" (*Amer. Sociol. Rev.*, vol. 5, pp. 700-712, 1940); and "Social Origin and Fame: The United States and England" (*Amer. Sociol. Rev.*, vol. 10, pp. 52-60, 1945).

cieties. The conflict of class vs. class is confused by a variety of other conflicts of group vs. group. Of these the most colorful perhaps is the conflict between rural and urban groupings.

In all civilizations there have been considerable differences between the interests, attitudes, sentiments, values, and even institutions of those who live on and by the soil and those who live in and of the town or city.¹ These differences have stemmed directly from the differences in the two ways of earning a livelihood and in the conditions under which livelihood is secured. In the main, the different ways of earning a livelihood have constituted a functional division of labor, with the rural worker producing food and raw materials from the soil, and the urban worker processing those materials and providing the rural population with finished goods. But the division of labor has not always been equable, and at times considerable conflict has arisen between the rural and urban segments of a society.

Until recently the ways of life of the rural and urban worker have of necessity been quite distinct. The rural worker has lived in a small, comparatively isolated group; and as a consequence rural life has everywhere tended to be primary in character and sacred in type. The townsman, on the other hand, has lived in a larger and relatively more heterogeneous grouping; and the society of the town has therefore tended to be relatively more derived in character and secular in type. The differences in these two ways of life have always and everywhere given both countrymen and townsmen a sense of in-groupness and have led to intergroup relations that have ranged from toleration to conflict and subordination. Almost every language has its counterparts to the terms "country bumpkin" and "city slicker," and in the folklore of every civilization there has been some version of the story of the traveling salesman and the farmer's daughter.

Rise of the Modern Urban Community.—Under the Romans towns had developed in most parts of western Europe, and the distinction between townsman and countryman had been marked. With the disintegration of the Roman Empire, the towns sank into obscurity; and until well into the Middle Ages the peoples of Europe were preponderantly rural. Thus during the feudal period urban-rural differentiation was a very minor aspect of Western society. When the beginnings of craft specialization and the associated growth of trade brought a revival of town life, the distinction between townsman and countryman reappeared and thereafter grew wider and more significant century by century. For not only were the economic and political interests of the towns different from

¹ For materials on rural-urban differentiation, ancient and modern, and an extensive bibliography, see A. Johnson, "Agrarian Movements" (*Encycl. Soc. Sci.*, vol. 1, pp. 489-515).

those of the still somewhat feudal hinterland, but the townsmen were developing a culture and a way of life that contrasted sharply with that of the rural dwellers. In time, as has been shown, the balance of political power swung against the rural feudal lords in favor of the towns; the monarchs of Europe were trade minded and hence town minded. The more favorably located of the towns grew into sprawling cities, and of these some were the seats of government and the centers of kings and courts. By the sixteenth century the urban form of life was politically, economically, and ideologically, although not yet numerically, dominant in most parts of western Europe and in the British Isles.

Until well into the last century town life had severe disadvantages. Sanitation was largely unknown; and the larger cities had a well-earned reputation for being plague spots. Wood had been used extensively in building the cities, except in Spain and Italy where this material was scarce, buildings were often jammed together, and roads and passageways were usually narrow and winding. Fires repeatedly burned out most of the larger cities, such as London and Paris. While calamities of this sort no doubt retarded the growth of cities, they did not prevent it; for the growth of cities was impelled by economic factors and had little to do with the attractiveness of the urban way of life. An economic check to the growth of the cities did appear, however, with the development of the mercantilistic concept of the way to national wealth; for the high tariffs on and outright prohibitions of the importation of foodstuffs and raw materials into each of the several countries kept food prices high and depressed the price of city-produced finished goods. Mercantilistic regulation of trade thus favored the rural segments of a country at the expense of the urban and did much to set the townsmen against the countrymen. A long struggle, largely political, then ensued between urban and rural populations. This conflict overlapped and at times confused the concurrent struggle of the growing middle class, preponderantly urban, to secure political recognition.

The eighteenth- and nineteenth-century political and industrial revolutions returned the balance of both political and economic power to the cities. The early factories had been located at or near a source of power, either streams to turn the water wheels or wood lots to supply the fuel for steam engines, and were therefore widely scattered and isolated. Consequently they detracted from the established cities. When, however, coal came into use as the primary source of power, factories tended to congregate either around the pit heads, where great industrial cities developed, or else in those established cities to which coal could be moved by barge. Since then, the urban way of life has become the dominant way of life of all Western peoples.

The Urbanization of Western Society.—The dominance of the urban mode of life over the rural is not peculiar to the modern period. Rome and its satellite cities and towns dominated the European countryside; the Greek city-state system subordinated the rural hinterland and its peoples; even in premodern China town and city tended to dominate, politically and economically, the rural villages. What is peculiar to modern societies is that the urban mode of life not only tends to dominate the rural but has gone far toward displacing it. The modern city has set the pattern for the rural way of life; in the city have originated almost all the technological inventions and the empirical and scientific discoveries that have made modern societies modern. And it has been in the city that social changes have occurred most rapidly. Here the family disintegrated fastest, and religious organization first lost its hold upon the people; and here, too, were evolved most of the new forms of social organization—the corporation, the club, mutual associations, etc. Rural social forms have been changing, very slowly in such countries as France and England, more rapidly in America, Australia, and other Westernized regions outside Europe. Much of that change, however, has been in the direction of deterioration without compensating reorganization. By and large, therefore, the rural way of life has been withering away. And as this has been happening, rural people have tended to take over urban forms. They continue to work the land, but they try to live in the mode of the city; and in many instances even the methods of working the land have taken on industrial, hence urban, characteristics.

The urbanization of the rural population, which may be described as a form of assimilation, has been most pervading in the United States, where the new techniques of transportation and communication have been most intensively exploited. In Britain and on the Continent the differences between urban and rural dwellers are still marked and lead to various forms of friction and occasionally to outright conflict. In the United States, on the other hand, the assimilation of rural peoples into the urban way of life has gone far toward eliminating linguistic, attitudinal, and other cultural differences between townsmen and countrymen. Such disparaging terms as "hick" and "country bumpkin" have lost most of their meaning and all of their sting; and the modern farmer's daughter is probably quite as wise in the ways of the world as is the lad from the big city.

REGIONALISM

The decline of rural-urban differentiation has been more than offset by a related increase in two other forms of intrasocial differentiation, regional and occupational. As was mentioned earlier, the same factors—industrialization, unification through new means of transportation and communication, etc.—that have been absorbing rural peoples into the

orbit of urban life have greatly increased occupational specialization. One type of occupational specialization is the concentration of the people of a given region upon the production of one commodity or a group of related commodities. This concentration of attention results in their developing economic interests and other social characteristics that set them somewhat apart from the people of other regions within the same general social, economic, and political area.¹

Regional differences, such as those between the people of Lancashire and Devonshire in England and between the people of New England and the Old South in the United States, are the product of many factors. Until a century or so ago transportation and communication between such separated regions were so limited that the people of each region were to a significant degree free to develop something of their own regional culture, such as a regional dialect; and some of the cultural peculiarities thus developed have persisted. While industrialization has greatly lessened the importance of this kind of difference, it has intensified the importance of regional differences in economic interests. The Civil War was not a struggle between soft-speaking Southerners and harsh-speaking Northerners but a struggle between a preponderantly rural South and a rapidly industrializing North; it was a clash of regional economic interests. And as industrialization has progressed, it has produced more rather than less opposition of this sort both in America and in Europe.

The conflict of interests between the North and South was a regional version of the long-standing difference between urban and rural peoples; but it was much sharpened by the fact that economic changes, stemming from industrialization, were destroying the foundations of the South's rural economy. Today similar conflicts of regional interests, much confused by the irregular spread of industrialization, exist in all modern societies. The preponderantly agricultural regions, including the towns and cities in those regions, constantly struggle to secure high prices for agricultural products and low-priced manufactured goods. The more highly industrialized regions struggle just as vigorously to get food and raw materials at low prices and to sell their products at high prices. This conflict takes political forms and is expressed in restrictive legislation of one sort or another. In the United States, for example, it has resulted in a host of contradictory and stifling measures, both Federal and state—high tariffs on manufactured goods for the benefit of industrial regions and equally high tariffs on raw materials for the benefit of the agricultural regions, artificial maintenance of "parity" prices for agricultural

¹ See H. W. Odum and H. E. Moore, *American Regionalism: A Cultural-historical Approach to National Unity* (Holt, New York, 1938); and R. B. Vance, *All These People* (University of North Carolina Press, Chapel Hill, 1946).

products and compensating subsidies to industry through the maintenance of an uneconomic freight rate structure, etc.

Regional conflict is not limited, however, to an opposition of industrial and agricultural interests. The growth of agricultural specialization (cotton in the South; wheat, corn, and pigs in the Middle West; cattle in the mountain regions; fruits and vegetables in the Far West; etc.) has tended to set up conflicts of economic interests between different agricultural regions. The South wants high prices for its cotton and peanuts and low-cost wheat and meat from the Middle West; the cattlemen of the Mountain states want an embargo on Argentine beef, which is cheap and good, while the cotton-producing South wants to sell cotton to the Argentines; the citrus growers of the Far West want low freight rates east so that they can undersell the Florida producers; and so it goes. Various industrial and natural-resource areas conflict in similar ways; the lumbermen of the Northwest, for example, want low freight rates east so that they can undersell the Southern lumbermen. To compound the conflict of regional interests, the gold miners of the Mountain states, of California, and of Alaska (and, in fact, of all the world) want and get high prices for their metal; then, to avoid adverse consequences to those regions that have goods to export, mostly industrial but also rural, such as the cotton-producing South, an obliging government keeps the gold purchased from the mining regions out of circulation, burying it back in the ground from which it came.

The vacillating and contradictory performance of our Federal government, and of all modern governments, is in no small measure a consequence of the differing interests of the various regions of the country. The modern state has tended to become the clearing house for just such oppositions of interests, thereby reducing regional and other group conflicts to a political level.¹ But the granting, via the state, of concessions to every regional pressure group is of uncertain efficacy. Such concessions perpetuate rather than resolve the organizational maladjustments that are the real source of the conflict, and they inevitably harm the society as a whole. Gold mining, for example, is *de facto* a socially useless expenditure of resources, both human and material. But because our government has become its patron, gold mining survives, useless though it is. And thus it is with many other regional economic activities; they are possible only because the society at large is taxed to subsidize them. So far, however, no democratic government has had either the political courage or the ability to take another course.

Some evolutionary changes have been occurring that may in time to some degree dissipate regional conflicts of interests, at least in the United

¹ See K. G. Crawford, *The Pressure Boys: The Inside Story of Lobbying in America* (Messner, New York, 1939).

States. The Southern states, for example, are becoming more and more industrialized, while at the same time the South's agricultural specialization in cotton has been giving way to a diversification of crops. The West Coast region, too, is becoming more industrialized. Such changes in the national distribution of economic activities are somewhat lessening the disparity of interests of the various regions. But it will be long before the Senator from Mississippi can see eye to eye on economic matters with the one from Massachusetts, California, Colorado, Iowa, or Texas. And until he does, the legislation that they enact will be in the nature of a compromise, in which each region partly satisfies its special interests at the expense of all the others, with the net result that all will secure much less than they might otherwise have done.

OCCUPATIONAL DIFFERENTIATION

Class and regional differentiations are considerably blurred and class and regional interests somewhat dulled by the fact that the members of each of the classes and each of the regions are themselves occupationally differentiated.¹ A middle-class Southern shoe merchant, for example, is much like all middle-class Americans in some respects. As a Southerner he is unlike many of them in that he speaks with a Southern accent, believes in high cotton prices, and calls the Civil War the War between the States; in these respects he is much like all Southerners of whatever class. As a shoe merchant, however, he is distinguished occupationally from most of the other members of the middle class and from most Southerners. His occupational knowledge, values, and interests identify him to a degree with those of whatever class and whatever region who work with or deal in shoes.

Within all societies there is some differentiation on the basis of occupation as well as class. The itinerant priest and the equally itinerant entertainer of the early Middle Ages had about equal social status; both lived on the bounty of those whom they amused or bemused, and both could wander at will from manor to manor. But their work set them apart. One was a man of God, full of pious sayings. The other was a singer of ballads and teller of tales, gay where the priest was solemn, colorful where the priest was drab. Similar and much more important occupational differences have existed wherever, as in all the ancient civilizations and in Europe upon the passing of feudalism, the craft techniques have been highly developed. For a high level of craftsmanship means a considerable degree of work specialization; and work specialization brings with it a somewhat special way of life and somewhat special interests, values, and other social characteristics.

¹For the conceptual distinction between class and occupational in-groups, see A. Salz, "Occupation" (*Encycl. Soc. Sci.*, vol. 11, pp. 424-435).

In the primitive tribe, the rural village, or the small town, occupational differentiations did not ordinarily lead to much in the way of occupational in-groupness. The butcher, the baker, and the candlestick maker may each have had something of his own way of looking at the world. The butcher was perhaps inclined to see all creatures, including the local housewives, in terms of stews and roasts; the baker of necessity worked at night so that there would be fresh bread come morning; the candlestick maker may have preferred dull days to bright; and each no doubt considered his own craft the most important. But since there were only one or two members of each craft, they could hardly form much of an occupational in-group and set themselves apart from the life of the whole community. They were, first of all, villagers and only incidentally butchers, bakers, or whatever they happened to be.

The rise of the great craft and commercial towns of the latter Middle Ages favored the development of strong occupational in-groupings, each eventually becoming more or less institutionalized as a guild. Guild regulations effectively reduced the competition of worker with worker in the same craft and to some extent eliminated the competition of each kind of craft guild with the others of its kind; thus the weavers guild of one town could not sell its product in another town in competition with the local weavers guild. The various kinds of guilds—weavers, spinners, cabinetmakers, shoemakers, etc.—did, however, engage in a covert but nonetheless significant conflict. The goal of each guild was to secure the highest possible price for its product, and this usually meant restricting production. But since the members of each guild were dependent upon a variety of other guilds for the goods that they used and had to pay a monopoly price for those goods, the high price that they received for their own products was really low in terms of real values. The standard of living of the urban peoples of latter medieval Europe was high by comparison with what it had been under feudalism; but because of the conflicting interests and conflicting monopoly practices of the various guilds, it was much lower than it might have been.

When the free-enterprise system of production and distribution finally supplanted the guilds, competition between productive units acted as a stimulus to increased productivity. Class differentiation then became more vital than occupational differentiation. It did not, however, eliminate occupational differentiation; indeed, industrialization had greatly increased occupational specialization. No occupational group organization comparable to the closed guild has developed in modern societies, but some organized opposition and much unorganized opposition have existed between certain of the many occupational groups. The early trade-unions, each representing a special craft, fought as bitterly among themselves as they jointly fought against their employers; and of recent years strikes

and other forms of labor stoppage have often been occasioned as much by jurisdictional disputes within the ranks of labor—*i.e.*, between sheet-metal workers and machinists—as by grievances against employers. And even the upper economic class, united in the belief that it is composed of the best blood and worthy of its special privileges, has been torn by internal dissensions that are in part occupational in character. Modern men of finance, for example, have never been particularly sympathetic toward those whose interests are mainly in the production of goods. They see the world in terms of black ink on their ledgers rather than in terms of automobiles rolling off the production lines.

Occupation and the Way of Life.—In contemporary societies there are an unprecedented number of specialized occupations. This is a consequence on the one hand of the steadily increasing division of labor and, on the other, of the extension of human knowledge and the elaboration of technological processes. It is no longer possible for one man to know all that can be known and to do all that can be done within even a single field of endeavor. Two centuries ago the worker-with-iron could learn during his lifetime all that was known about iron, and he could learn to do everything that could be done with iron. Today the worker-with-iron is a specialist; either he smelts the metal or casts it or rolls it or forges it, or he makes this or that complex alloy with it, or he fabricates this or that product from it. A century ago the general merchant could deal intelligently with all the goods available to a community; today the merchant either specializes in one or a few kinds of goods or else, like the chain-store grocer, he sells a great variety of packaged merchandise about which he knows little or nothing at all. A generation or two ago a chemist was a chemist; and if he was a good chemist, he kept up with all the developments in the field of chemistry. Today it is about all that a man can do to keep abreast of the developments in one chemical specialty—food chemistry, biochemistry, organic chemistry, or the like.

As each field and subfield in technology, business, science, and the arts has become more complex and more highly specialized, the socially differentiating effects of occupation have become more significant. The way that one earns one's livelihood is by no means the determinant of the way one lives; the two aspects of life are not to be separated into cause and effect. The fisherman does not live near the sea and eat, think, and smell of fish because he earns his livelihood by fishing, any more than he fishes for a living because he happens to live near the sea and like fish. The fishing and the fishing way of life are but different aspects of an interdependent whole. What can be said is that in all societies, and most notably in contemporary societies, the members of each occupational specialty share, in addition to their occupational skills and knowledges, some common social characteristics that in some respects set them apart

from and at times bring them into conflict with other occupational groups and with society at large.¹ In such differentiation the economic factor is only one of a complex of related factors. Carpenters may resist and resent the development of prefabricated housing and the use of plastics and other substitutes for wood because they fear that these things will bring a loss of income. But they also resent such innovations because they are carpenters trained to the handicraft mode of house construction and loyal to wood, the hand saw, the hammer, and the nail. Physicians fear socialization of medicine not only because they believe that this mode of organization would reduce their incomes but also because they prefer the surgical knife to the form-filling pen and because they have become accustomed to an exciting way of life that includes night emergency calls, bolted meals, sprints from patient to patient, and many hours in the consulting room. Under socialized medicine, life for the physician trained to unsocialized medicine might be as dull and orderly and futile as that of a bureaucrat.

The infinite subdividing of labor has brought great increases in productive efficiency and has contributed immeasurably to the rise in the standard of living of modern peoples. At the same time it has intensified the occupational basis for social conflict. Except perhaps between warring labor unions, conflict between occupational in-groups has not taken violent forms. Corporation lawyers and criminal lawyers have never staged a street battle, but they quite commonly represent opposed interests in court; bankers and industrialists have not yet come to blows, but they frequently work at cross purposes. And all occupational group conflicts, violent or not, constitute in some way or other a loss to the whole economy. The modern counterparts of the butcher, the baker, and the candlestick maker neither look at the world from a common point of view nor live in the same village. Although each is but a small cog in the vast social machine, they lead lives apart, dissimilar and somewhat at odds.

SEX DIFFERENTIATION

The organizational changes that modern technology has necessitated have in at least one regard diminished rather than intensified intrasocial differentiations. In almost all premodern societies there was a marked

¹ For descriptions of a number of current occupational ways of life, see W. F. Cottrell, *The Railroader* (Stanford University Press, Stanford University, 1940); F. R. Donovan, *The Woman Who Waits* (Badger, Boston, 1920), *The Saleslady* (University of Chicago Press, Chicago, 1929), and *The Schoolma'am* (Stokes, New York, 1938); E. T. Hiller, *Houseboat and River-bottoms People* (University of Illinois Press, Urbana, 1939); and M. W. Nichols, *The Gaucho: Cattle Hunter-Cavalryman-Ideal of Romance* (Duke University Press, Durham, 1942). For a technical discussion of occupational differentiation, see C. L. Lastrucci, "The Status and Significance of Occupational Research" (*Amer. Sociol. Rev.*, vol. 11, pp. 78-84, 1946).

distinction in the social functions and in the social characteristics of the sexes. In many primitive societies women did most of the routine work, while the men occupied themselves with such hazardous but exciting labors as hunting, fishing, or fighting. In the classical civilizations woman's role varied from that of household drudge to priestlike prostitute; invariably, however, her role subordinated her to men. There were no women philosophers in Athens, no women senators in Rome, no women but camp followers in the armies of Alexander, Caesar, and Charlemagne. In Chinese society women were domestics; thus during the many centuries of its operation women never attempted to take the scholarly examinations that gave entree to governmental positions. There were always individual exceptions—the queen who ruled over the men who operated her government, the wife who managed her husband and through him the family affairs, the courtesan who was more powerful than king, etc.; but in all the great civilizations of the past women as a group were traditionally subordinated to men.

Social subordination of women has not, however, been universal; and it most certainly is not a biological imperative.¹ Some primitive social systems have either minimized the difference between the role of men and that of women or have made the division of labor such that the social status of each group has been more or less the same. Moreover, in at least one type of social system, that of the matrilinear family, woman's position was in many respects dominant.

Modern Western societies inherited via feudalism that particular sex division of labor that is characteristic of the patriarchal family system. This system, found also in one form or another in such otherwise varied societies as those of China, India, Russia, and the Moslem peoples of the Near East, sharply differentiates the social roles and social attributes of the sexes. In it woman's place is in and of the home. She is the bearer and rearer of children, the homemaker, the servant of her lord and master—father, husband, or son. In many instances she has been in law but a chattel, to be bought and sold. In all instances she has been deemed an inferior sort of creature in nature as well as in social status, and she has been required to adhere to a code of sex morality more rigid than that applying to men.

The patriarchal sex division of labor, sex segregation, and a dual standard of morality may have had a functional basis at some times and under certain conditions. When the family was a defensive as well as economic unit, the loyalty of the various members was essential for family sur-

¹ For a general survey of the scientific findings on the physiological and anatomical differences between the sexes and their importance in the determination of the status of the sexes, see A. Scheinfeld, *Women and Men* (Harcourt, New York, 1944). See also M. Mead, *Sex and Temperament* (Morrow, New York, 1935).

vival. A traitor in the household might have led to disaster; and the girl who had known a lover before her marriage might possibly have been less loyal to her husband's family than she otherwise would have been. Perhaps considerations of this sort led to the insistence, under the patriarchal system, that brides be virgins. The relegation of women to the domestic sphere may also have had functional value. Where, as in most premodern societies, women during their childbearing years gave birth and nursed at the breast a succession of infants (few of whom lived to maturity), their biological functions tied them to the household, both precluding their going far afield and making it sensible for them to work mainly in the household.

However functional the patriarchal sex division of labor and the differential status and codes of conduct of the sexes may have been under Western postfeudal and early modern conditions, they ceased to have much functional significance when technology and associated changes broke down the family system. As was indicated earlier, the new technologies transferred most of the work that was once done in the household to the factory. Moreover, the decline of the birth rate greatly lessened the duties of motherhood and to that extent released women from "biological" bondage to the household. It was not, however, until well toward the end of the last century that Western women were in any measure released from ideological and legal bondage to a role of social subordination that had actually lost most of its significance.¹

A half century ago feminism was a burning issue. Here and there women were striving to gain equality with men before the law, in custom, and in morality. Everywhere there was a real conflict between what the new technologies and consequent organizational changes forced women to do and to be and the traditional ideas of what women should do and should be. Ideologists, some posing as scientists, were busy assembling proof that women are inherently incapable of assuming a role of equality with men, just as the Old Testament story of Adam and Eve so clearly demonstrated. During this last half century, however, women have gradually secured some of the prerogatives that were formerly masculine monopolies. Most educational institutions are now coeducational, and the girl who ventures beyond the traditional subjects of languages, art, and music is not now deemed to be going out of her intellectual depth. Women are accepted, with tolerance if not a warm welcome, into many of the professions. In many countries they have been enfranchised; and in most they are now permitted to own property and

¹ For historical materials, see G. Meyerand, "Women's Organizations" (*Encycl. Soc. Sci.*, vol. 15, pp. 460-465); and B. J. Stern, "Position of Women in Society" (*Encycl. Soc. Sci.*, vol. 15, pp. 442-451). The latter article provides an extensive bibliography.

are otherwise recognized by the law as human beings.¹ Within the past few years they have even secured the right to smoke in public and to dispense with the encumbering garments that were once a badge of their servitude.

As women have gained these and many other rights, the differences in interests, values, sentiments, skills, and knowledge of men and women have tended to level out; and the basis for conflict between the sexes has tended to disappear. By preference and by necessity, women may still be more home-centered than men; they are unquestionably still the ornamented sex; and they are far short of being in all respects the social equals of men. But it is no longer necessary to argue in behalf of the inherent equality of men and women. Only militant nationalists, as were Hitler and Mussolini, would now venture to raise the old cry that woman's place is in the home and that her divine duty is to bear and rear strong sons to sacrifice to the gods of war.

¹ See N. Fishman, *Married Woman's Bill of Rights* (Liveright, New York, 1943).

Chapter XIX

NATIONS, NATIONALISM, AND INTERNATIONAL CONFLICT

AS A system of social organization the modern state is the best device that man has yet developed for the maintenance of peace and the achievement of coordination between large numbers of otherwise competitive and conflicting groups. The state is not a perfect form of large-scale social organization, and it is far from being sufficiently large to meet the requirements of modern technology and commerce. The rules of conduct that it enforces are often antiquated and functionally inexpedient; they are often a means by which the few dominate the many; and they are frequently violated. Even within a modern state men occasionally fight each other in the manner of beasts; gangs of outlaws form to rob and murder; and racial, class, and other group conflicts sometimes boil over into violence. Moreover, the state units as they are now constituted are a heritage from the Middle Ages and have little more functional relation to the economic and other needs of today than the feudal units of an earlier period had to the economic and other needs of the Middle Ages.

Nevertheless, through the mechanism of the state there have been united and kept relatively peaceful the largest numbers of people who have ever maintained the peace in the history of the world. Never before have so many people lived and worked together in such comparative harmony; never before have men been able to go about unarmed, secure in the knowledge that they will not be molested by stronger and more ruthless men; never before have the weak and the timid been able to travel the highways and byways of an entire continent without fear and to maintain possession of great material wealth without recourse to force. As a means of keeping the peace among its many citizens, the modern state is without peer.

But in its relations with other states, the modern state is the primary breaker of the peace of the world. For in its relations with other states, the role and the function of the state is entirely reversed. The peace-maintaining state then becomes the militant nation, its citizens an in-group that is opposed, in one or many ways, to the citizens of all other states. Whatever they may be as citizens of the United States, the people of the American nation, as of any modern nation, have a sufficient sense of belonging together and a sufficiently strong belief in the unalterable

superiority of the American nation that they will upon provocation sacrifice their sons and their wealth to preserve their group integrity.

The nation is the largest and in some respects the most tenacious of the in-groupings of the contemporary world. It is also the most consistently belligerent and the least compromising. And it is the only unit of social life that is sanctioned by the mores of modern societies to resort to force in its relations with comparable units. Only the state in its role as the nation can and does depend mainly upon brute force to keep what it has and, upon occasion, to take from other nations what they possess.

THE RISE OF THE MODERN NATION

Feudal Europe was an armed camp. War was a normal state of affairs, and feudal society was necessarily centered around military conquest and defense against conquerors. Architecture, for example, was highly developed in one direction only—toward the construction of castles that could withstand attack and endure siege. Protection against attack, rather than comfort and convenience, was the motif of all construction work. Roadbuilding, canal building, and the other construction techniques that had been developed during the period of the Roman Empire were lost arts. Metalworking, too, was focused on war; the serfs broke the ground with wooden hoes, while iron went into the making of fighting tools. Man was the worst enemy of man, and war and the threat of war left little time for the conquest of physical and biological nature.

Since group survival meant first and foremost protection from human predators, the dominant ideologies, the primary values, and the basic social sentiments were necessarily those of military ability. A muscular physique was valued above intellectual agility, physical prowess above technical skills, the crafts of weaponmaker above those of tiller of the soil, and protection by a strong lord above the “spiritual” offerings of a priest. But because the feudal unit was an independent economic unit as well as a military one, the feudal system at its zenith was functionally integrated.

When, however, technological innovations began to appear in western Europe and trade and productive specialization brought about considerable economic interdependence of feudal units, destroying their economic self-sufficiency, the military attributes of the feudal system, like the class structure under that system, lost their functional value. The military efforts of the feudal units to remain politically independent then became a barrier to full utilization of the new techniques of production. For some centuries thereafter wars were mainly conflicts between the rising overlords, who represented the forces of political unification, and the reactionary feudal lords.

Under feudalism, war had been a clash between two comparable institutional units; from such war, as from the tribal wars of primitives, nothing new in the way of social organization had arisen. One manor would extend its lands by victory in war, another would be contracted by defeat in war; a century later the procedure would be reversed; and century after century, war brought no real change to social life. But the wars between the medieval overlords and the remaining feudal lords were a process of political consolidation out of which came a new form of political organization and a vastly larger unit of political life. These wars were, in effect, revolutionary, a clash of the representatives of two mutually opposed systems of political organization, one old and outdated, the other new and only in process of evolving.

As the revolution progressed, the feudal units became united, first superficially and in time in more fundamental ways, under the rule of strong kings. The military ideologies, values, and sentiments of feudalism nonetheless persisted among the remnants of the feudal aristocracy. These were expressed through interfeudal conflict that no longer had any functional significance and was now entirely ritualistic. War within the realm was a dilettante affair. The knights met in formal combat and more lances than heads were broken. This period is the one that has been romanticized for moderns as the time when knighthood was in flower, precedent for which can be found in the tales of King Arthur and the Round Table. The medieval knights were, in fact, anachronisms, and their combats were sports events. Nonetheless, their antics undoubtedly did much to fix in Western culture the feudal concepts of personal valor, personal honor in combat, and the glories of military victory, all of which are elements of contemporary nationalism.

The Realm.—Meanwhile there was evolving among the common people a sense of identification with a nonfeudal unit, the realm. This process involved a transferring of loyalty from the manors and lords to a realm and a king, who became the symbol of larger unity. A man was still known by the town or village of his birth, and most men never left their birthplaces. But a man was also known as a subject of this or that king; thus he was a Spaniard as well as a citizen of Barcelona, a Frenchman as well as a native of Avignon. The detaching of the individual from his identification with the feudal unit and his becoming identified with the realm and the king was a slow and erratic process, and during the transition there was much admixture and conflict of concepts and loyalties. Thus a man might in a given instance be more loyal to his duke than to his king; in another instance he might fight in behalf of his king and the realm. At times the king's law was more honored in the breach than in observance, and often the king's police and magistrates were more obedient to local customs than to the law of the land.

It was the political chaos of this transitional period that produced Machiavelli's *The Prince*, in which it was argued that all men are by nature evil and can be made to behave well and wisely only by trickery.

But it was more by the force of economic circumstances, implemented by the force of the king's arms, than by trickery that feudal and regional units did gradually merge into realms. And this political integration brought a further change in the nature and consequences of warfare. Until there was a considerable degree of political unity within the realm, kings were largely engaged in forceful pacification, *i.e.*, in stamping out the remnants of feudal disunity. When this need for armed force declined, ambitious monarchs turned their energies to expanding their realms. And since by this time most of the peoples of Europe were already incorporated into kingdoms and a new world was then being opened up by overseas explorers, expansion took for the most part the form of empire building.

The Empire.—Empire building was initially a means of obtaining the non-European sources of precious metals, jewels, and spices. For a time at least, military might was a means to wealth; and although much of the wealth secured by conquest was siphoned off into the king's treasury, apparently enough spilled out to the common people to make the prosecution of war economically advantageous to the people of those kingdoms that were successful. The making of war was in fact undertaken much as is a modern business enterprise. For a share of the profits, for example, a sovereign would commonly grant to individuals the right to loot and sink merchant ships sailing under the flag of a king with whom he was actually or nominally at war. Likewise a sovereign would grant, also for a price, to favored individuals the right to organize expeditions for the conquest or settlement of new lands. From about the fifteenth to the nineteenth centuries, war as a mode of economic enterprise seems on the whole to have been profitable for Europeans. At least the peoples of western Europe did not express dissatisfaction with this aspect of the state of human affairs. Contributing to their complacency was the fact that most battles were fought at sea or in foreign lands, that comparatively few persons were involved, and that by and large war was the business of kings rather than commoners.

Nationalism.—It was during this period, when the realm was a fair reflection of the largest unit of economic integration and when war was a fairly clear-cut means to material wealth, that nationalistic sentiments, loyalties, and traditions developed and became fixed in Western culture.¹

¹ See C. J. H. Hayes, *Historical Evolution of Modern Nationalism* (R. Smith, New York, 1931), and *Essays on Nationalism* (Macmillan, New York, 1937); F. Hertz, *Nationality in History and Politics: A Study of the Psychology and Sociology of*

Nationalism is the ideological aspect of the nation; and like the nation which it supports, nationalism is one of the major factors in the life of contemporary peoples.

Nationalism is founded upon the belief that the individual's personal welfare somehow depends upon the continued existence of the state as an independent sovereign entity. Associated with this belief is the characteristic in-group concept that one's own state is superior to all others. Thus to a political unit, a product of historical accidents and incidents, are attached in-group sentiments that make that unit sacred and that make the perpetuation of that unit a moral obligation incumbent upon each citizen. Included in these sentiments is a variety of beliefs and values inherited from feudalism that make the nation militant and that upon occasion make blood sacrifice for the state the highest form of human endeavor.

Nationalism of a sort was an aspect of the ancient Greek city-state system. The Romans, too, tended to associate their personal welfare with that of the state. But the seeds of modern nationalism are to be found in feudalism; time and changing conditions simply led to a transferring of the feudal in-group concepts of survival and out-group antagonisms and the feudal complex of military traditions and values to the state, even as changes had earlier brought a shift of personal loyalties from the lords to the king. (That feudalism is the traditional basis for modern nationalism is indicated by the rapidity and ease with which the feudal peoples of Japan became nationalistic and in this respect caught up with Western civilization in less than one century, while nonfeudal peoples, such as those of China and India, have had great difficulty in developing the militant nationalism that is necessary if states are now to survive as politically discrete units.)

The Trend toward Internationalism.—The adoption by the various states of western Europe of the mercantilistic economic policy is perhaps the most striking evidence of the growth of nationalism. Under this policy, it will be recalled, the political unit and the economic unit were considered as one. The wealth of a people was presumed to depend upon the condition of the king's treasury; and no doubt to some extent it did; for with such wealth the sovereign could fight bigger and better wars and thus, perhaps, make a fat profit for himself and indirectly for his people.

But the economic conditions that had given rise to nationalism did not remain constant. Under handicraft techniques of production, each of the several states had been a fairly self-contained economic unit. By and large,

National Sentiment and Character (Oxford University Press, New York, 1944); and H. Kohn, *The Idea of Nationalism: A Study of Its Origins and Backgrounds* (Macmillan, New York, 1945).

imports other than precious metals had consisted of such luxury items as tea, spices, tobacco, and the like. Political integration had up to this point more or less paralleled economic integration. Thus what happened in England was of small importance to Frenchmen, so long as the English stayed out of France. And what happened in India was of little importance to the Englishman; he could, if necessary, get along without his breakfast tea. The development of industrial technology and the consequent intensification of specialization in production changed all this. As each state in turn became industrialized, the states lost their economic independence and became economically dependent upon one another. By the opening of the nineteenth century, what was happening in England was very much the concern of every Frenchman, whether he realized it or not; from England came many of the goods that he used, and to England or its possessions went many of the things that he or his fellow citizens produced.

The economic integration that began early in the Middle Ages and that led in the first instance to the political unification of peoples into realms was renewed and greatly intensified by the industrial revolution and since then has continued to grow ever more pronounced.¹ Almost every recent innovation in technology has in one way or another increased the dependence of the people of each region upon the people of all the other regions of the world. Within the past century and a half all the peoples of the world have become bound together in a tenuous economic mesh, their social isolation more or less broken by the new techniques of communication and transportation, and their crafts, industries, and raw-material production more or less specialized and dependent upon world trade. The growth of economic internationalism has been accompanied by a vast increase in world productivity; and in this productivity the various peoples of the world share in varying extents, the least industrialized the least, the most industrialized the most.

The internationalization of economic life has been effected through the development of various forms of international organization, most particularly the coordination of special groups within each of the several nations. Business enterprises have necessarily acquired international ramifications. Trade has become in part an exchange, complex and laborious, between the citizens of different nations; and some new organizational devices, such as cartels, have evolved to provide on the international level the monopoly powers that the corporate form of business organization

¹ See W. F. Cottrell, "Cultural Growth of Internationalism" (*Amer. Sociol. Rev.*, vol. 10, pp. 586-595, 1945); R. Muir, *The Interdependent World and Its Problems* (Constable, London, 1932); W. R. Sharp and G. L. Kirk, *Contemporary International Politics* (Rinehart, New York, 1940); and E. Staley, *World Economic Development* (International Labour Office, Montreal, 1944).

achieves within the nation. Science, education, and many other phases of contemporary life now have their international as well as their national aspects.

No comparable internationalization of political relations has, however, occurred. As organizational units the states are very much what they were before the industrial revolution; and modern peoples are even more nationalistic than were those of eighteenth-century Europe. Elaborate procedures have evolved for the conduct of interstate relations, such as diplomacy with its ritualistic protocol; the various states enter into treaties of one sort and another; from time to time attempts have been made to set up international bodies for the peaceful settlement of interstate disputes; and during times of war military necessity may lead a number of nations to form an uneasy union. But political internationalism is no further advanced today than it was two centuries ago.¹

The modern state has proved to be a highly adaptable mechanism, if at times a not sufficiently adaptable one. During the past century or two, modes of state organization have changed greatly; and the functions of the state have constantly expanded as new needs have arisen. But as nations, states have long since lost all adaptability. The size of nations has remained almost constant in a world that is otherwise undergoing continuing, marked change. The relationship of nations has remained that of in-groups with a fanatical reverence for their sacred "sovereignty" and a traditional belligerence toward one another. Thus although nationalism may have been a functionally effective concept during the eighteenth century, it is now an ideological barrier—in this respect comparable to the ideology of race—to political integration that is commensurate with the internationalization that has been occurring on other levels.

WAR IN THE MODERN WORLD

Social organization everywhere minimizes physical conflict among in-group members. The status, rights, duties, and prerogatives of the various members of an in-group are assigned and maintained without much regard to physical prowess. The success of any group endeavor, be it the rowing of a boat or the conduct of a business, seldom depends upon physical strength per se. Success depends, rather, upon the coordination of whatever physical strength may be involved and upon the skills and knowledge of the members. The biggest and strongest man in the tribe might be able to win dominance over the tribe by physical combat with the various members; but his size and strength would be no assurance that he would rule wisely and well. Thus even among the most lawless criminal gangs, ancient or modern, there have always been social rules

¹ See S. J. Hemleben, *Plans for World Peace through Six Centuries* (University of Chicago Press, Chicago, 1943).

that prevented the physically strongest from surviving at the expense of the weaker. To this extent social organization is the negation of the doctrine that might makes right. In the jungle it does; in society it does not.

The minimization of resort to force within the group has seldom precluded the use of force by the group against out-group members, and very often it has been associated with the sanctioned use of force against some out-group or other. In either event, the rules of conduct that have applied to the in-group have been entirely different from those that applied to the out-group. To kill a member of one's in-group has always been murder, punishable perhaps by death. To kill a member of an enemy group during time of war, on the other hand, has always been an heroic act.

Premodern War.—War, organized physical attack upon or by an enemy group, has apparently been a fairly common phenomenon through the whole of human history.¹ Most peoples have had their traditional enemies, real when the interests and activities of the out-group have threatened the survival of the in-group, nominal when opposition between the two groups has been simply a matter of social inheritance, as it was between the clans of Scotland and has been among many tribal peoples. Not all peoples have made war their central concern, as did those of feudal Europe and some of the primitive tribes of America and elsewhere. But even the most peace-centered societies, such as China and India, were upon occasion subjected to military attack by warlike barbarians, to raids by bandit gangs, and to rebellious uprisings.

Many of the wars of the past were ritualistic procedures in which the combatants met and fought at a time and in a mode dictated by common tradition. Some of the American Indian tribes engaged in warfare of this sort.² With them there was a time and a place for war and a time for peace. And, as was indicated earlier, much postfeudal combat was staged; lord challenged lord, and they and their fighters met at a time and place agreed upon. Later this mode of combat was supplanted by the duel between individuals.

War by joint arrangement or by custom was not a clash of peoples with irresolvably opposed interests but, rather, of peoples who had a common interest in going to war. In this sense it was comparable to the battle of the football field; indeed, war of this sort probably served much the same revelous functions for the participants and the spectators as does a football game or other violent form of sports conflict today.

¹ For descriptive material, see A. Vagts, *The History of Militarism* (Norton, New York, 1937).

² See G. T. Hunt, *The Wars of the Iroquois: A Study in Intertribal Trade Relations* (University of Wisconsin Press, Madison, 1940).

Ritualistic war would seem to have been a cultural holdover from a time when the involved groups had engaged in vital conflict. At any event, ritualistic war tended to be much form and little content. Although blood might be spilled and some unlucky combatants might lose their lives, there could be nothing very serious about a mortal combat that was conducted in accordance with elaborate rules of deportment. Opposing military forces often laid down their arms at midday so that they might enjoy a leisurely meal and a refreshing nap before resuming combat; sometimes they called a truce each day from sundown to sunrise because night fighting was difficult and dangerous; and quite frequently they fought only with certain designated weapons because the use of any other weapons would have given an unfair advantage to the user.

Wars of conquest (or, from the point of view of those being attacked, of survival) have sprung from entirely different circumstances and have been conducted with an almost total disregard for "rules." Their basis has been the desire of one in-group to expand its wealth, its territories, or its powers at the expense of some or many out-groups. Most of the wars of antiquity were of this sort; all the great civilizations of the Mediterranean became at one time or another predatory and attempted to absorb by military conquest the culturally inferior peoples around them. Centuries later, western Europeans did likewise with the culturally inferior peoples of most of the world. Such wars have had, it will be recalled, the potentiality of profit for the winner; and they are to be thought of as a complex and large-scale parallel to the attacks of brigands, who live by violence and theft rather than productive labor. Since the interests of the predator and the attacked groups are unalterably opposed, war between them has always been a bitter and unrelenting affair—there was no time out for lunch, there were no rules other than those of expediency.

Revolutionary war, such as that which was involved in the consolidation of the kingdoms of western Europe and as that which subsequently occurred between classes and religious groups within these kingdoms, will be discussed in the following chapter. Like war of conquest, revolutionary war is invariably unregulated and is therefore exceedingly destructive. But unlike war of conquest, which can at the most bring about an extension of one social system to new peoples and territories, revolutionary war has often played an important role in bringing about a new or partly new system of social life.

Modern Wars.—Except for revolutionary warfare, all the wars of the premodern period were conflicts between groups that were both politically and socially discrete. Modern wars, on the other hand, are physical conflicts between politically discrete but otherwise interdependent

groups. They therefore injure the victor as well as the vanquished, and they impose an increasingly heavy burden on all modern peoples.

Wars between nations are the major form of physical conflict today, a fact that is commonly lost sight of during the period of peace between wars. In peacetimes the lynching of one Negro, the injury and death of a few strikers at the hands of the police, the cracking of a few heads in a street riot, a gang shooting or a battle between gangsters and police, or the calculated murder of an old woman is in such marked violation of the normal that it attracts great attention and arouses much indignation. Thus if one were to judge by the newspaper reports of the 1920's, gangster violence was at that time a major condition of life in America, and the city of Chicago was a perpetual battlefield. Again, if one were to judge by the newspaper reports of the early 1930's, labor strikes and riots were normal features of all American cities; and Paris, traditional center of radicalism, was in perpetual chaos.¹

Actually, however, the number of modern people who are injured or killed in violent combat other than that of war between nations is insignificant. Until and unless physical conflicts between races, classes, or other groups culminate in large-scale and prolonged civil strife (as in the American Civil War and the recent Spanish Civil War), those conflicts are significant mainly as symptoms of the constant and widespread friction between such groups. Such friction is socially costly in that it makes for social and economic inefficiency and induces individual unhappiness of great variety and magnitude. But it presents little hazard to life and limb; and the social costs, great though they are, are slight in comparison with those of war between nations. For every American Negro killed or injured in racial violence, many hundreds have died in defense of the nation. For every American worker who has died in behalf of the "class struggle," thousands have given their lives in the preservation of the American state.

Military Techniques and Tactics.—Every militant people has had as a part of their cultural heritage a complex of military tools, tactics, and strategies, which have evolved in the same way that other aspects of their culture have evolved, *i.e.*, by invention and borrowing.² Strategy, the way in which an enemy force is met—by attack, defense, evasive action, or however—is subject to so exceedingly few variations that military historians can draw strategic parallels between the battles led by an Alexander and a Hindenburg or by a Hannibal and an Eisenhower. The prevailing fashions in military strategy have vacillated over the

¹ For newspaper reports on the many conflicts of this period, see H. P. Fairchild, *Contemporary Sociology* (Nelson, New York, 1934).

² See W. Kaempffert, "War and Technology" (*Amer. J. Sociol.*, vol. 46, pp. 431-444, 1941).

centuries, much in the manner of clothing styles and for about as much reason; but little that is new has been added. Military tools and techniques, on the other hand, have changed over the ages fully as much as have the tools and techniques of cultivation, communication, and transportation.¹ And as the tools and techniques of warfare have changed, so of necessity have the tactics, the organizational procedures by which the tools and techniques are employed.

The relation between military techniques and tactics is fully as close as that between production techniques and work organization. In war as in peace, however, men have usually been slow to revise their organizational procedures to meet the functional requirements of new techniques. Historically, there has been a marked tendency for each new weapon to be used in the way that was traditional for its predecessor, with the consequence that a time lag has occurred between the adoption of a new weapon and the development of a form of military organization appropriate to its use. Thus the sword and shield had been used for many centuries before the Greeks finally devised the phalanx, in which the fighters massed together and provided protection for one another by presenting a solid wall of shields to the enemy. This tactic, subsequently used with good effect by the Romans, persisted long after the invention of the cannon made it inexpedient. (The cannoneer could, of course, break up an entire phalanx with one lucky shot.) Thus the sixteenth-century Swiss infantry, which was for a time almost indomitable because of its custom of advancing in compact phalanxes armed with long pikes, was so much wedded to the phalanx that it would not change its tactics to meet the new weapon; and as a consequence Swiss military power rapidly declined.

Similarly, the method of mass attack that was relied upon by the British and French during the first two years of the First World War had been developed as a means of overwhelming an infantry armed with single-shot rifles. The Germans had, however, perfected the use of the rapid-fire machine gun, which made it possible for them to mow down an attacking mass. But the tactic of attacking in thin, successive waves, a tactic that forced a heavy expenditure of ammunition for rather light casualties, did not develop until the third year of the war. At the outbreak of the Second World War, the British and French were committed to the tactics of static warfare, with troops dug in along a solid front, as they had been at the close of the preceding war. Meanwhile, however, the Germans had developed new tactics based upon the airplane and tank as weapons. With these tools and tactics they were able

¹ For a description of the evolution of military tools and their relation to strategy and tactics, see L. Montross, *War through the Ages* (Harper, New York, 1944). See also J. F. C. Fuller, *Armament and History* (Scribner, New York, 1945).

to overrun Europe, and they came close to winning their war of conquest. In the end they failed, but not until the stimulus of necessity had brought a revolutionary change in both the tools and the tactics of the British, Russians, and Americans.

Conservatism has always been characteristic of military organizations, in part because the regimental mode of organization has deadening effects upon initiative and in part because the high stakes that are involved in any military venture discourage experimentation. As a consequence, the adoption of new tools of war has always been delayed; and the evolution of appropriate tactics has frequently lagged at least one war behind each new weapon. Nevertheless, the tools of war and in time the tactical employment of those tools have over the centuries changed almost as rapidly as have the technologies and work organization of peacetime production. Much of the development of war technology has been simply an application to war of peacetime techniques; the truck, the airplane, the tractor, the radio, and many other devices were, for example, invented in peace for peacetime use and were put to war during wartime. Some devices, however, such as the sword, the lance, the catapult, gunpowder and the guns and cannons in which it is used, the submarine, and the atom bomb, were invented as solutions to problems of war. Occasionally they have appeared, as did the atom bomb, during the course of actual warfare; more often their invention has been a peacetime preparation for future wars.

The Mechanization of Warfare.—The fighting tools of all primitives were as simple and as undifferentiated as the tools with which they fished or hunted or cultivated the soil. The peoples of the ancient civilizations, on the other hand, displayed considerable ingenuity in the development of war tools. The Egyptians devised a great variety of hand weapons, they used trained lions against the enemy, and they sometimes rode into battle in two-wheeled chariots. The Assyrians improved upon the chariot technique and seem to have bred horses of exceptional size for this particular purpose. The Romans added scythe-like knives to the chariot wheels and a shield to protect the driver from enemy lances. More complex were the devices for breaking into walled towns—the swinging ram, the catapult, the siege tower, and Greek fire, an incendiary composition that was flung into walled towns by a catapult. And these devices for assault were more or less paralleled by defensive techniques. Walls grew thicker and higher; and various methods of protecting walls against attackers, such as pouring hot oil or molten metal down on the enemy, were developed. Warfare was, however, largely a matter of personal, hand-to-hand combat. Archers might upon occasion loose a flight of arrows at a massed foe and thus kill impersonally and indiscriminately; but the numbers that could be killed in that way were

limited, and most great battles were ultimately decided in hand-to-hand encounter. As a consequence, the tools of war were generally less decisive factors than were the warriors themselves; war was in the main a handicraft procedure.

With the advent of gunpowder (about 1400) and the invention of the cannon there began a slow evolution in the character of warfare that has now culminated in the almost total mechanization and depersonalization of war. Early guns and cannon were unreliable and were often more dangerous to their users than to the enemy. As their accuracy, range, and dependability were improved, guns and cannon gradually displaced the sword, the crossbow, and the lance. Increasingly, the combatants fought at a distance. Although hand-to-hand combat is still at times a decisive factor in battle, as it was in the jungle fighting of Burma and the house-to-house fighting in the cities of Germany during the latest war, most of the maiming, killing, and destruction of property is now wrought by gunners or bombers who never see, much less encounter, their victims. As a consequence of mechanization, there has gradually come about in warmaking somewhat the same kind of depersonalization that has occurred with industrialization in the field of production. At the same time, and for the same reasons, the making of war has become a maze of highly differentiated, specialized activities. And with this change in the method of making war there has come about a revolutionary change in the character and significance of war.¹

Military Conscription.—It was possible to conduct handicraft warfare on a small scale; and even the great armies of the ancients were but loosely knit aggregations of small fighting units. The conduct of a mechanized war, however, requires a huge, highly integrated organization; and this has in turn meant the general substitution of "civilian" armies for professional armies.² In Greece, Rome, and the other societies of antiquity, all the fighting was done by professionals—by standing armies of men who made a career of fighting and whose numbers were small in comparison with the civilian populations. Likewise in feudal Europe the lord and his fighters were professionals. The serf did not drop his hoe and go off to war; he stayed with his fields while his soldier brother went to battle. With the decline of feudalism and the beginnings of political unification under kings, chief reliance was placed, as has already been indicated, upon mercenaries. Soldiers were in general sol-

¹ The contrast between modern and premodern warfare is discussed in detail by C. Falls, *The Nature of Modern Warfare* (Oxford University Press, New York, 1941); and H. Foertsch, *The Art of Modern Warfare* (translated by T. W. Knauth, Veritas, New York, 1940).

² For this contrast, see P. Schmitthenner, "Mercenary Troops" (*Encycl. Soc. Sci.*, vol. 10, pp. 339-343); and E. Colby, "Conscription" (*Encycl. Soc. Sci.*, vol. 4, pp. 220-223).

diers of fortune who fought for the king who paid the best wages. An ordinary citizen might suffer the ravages of war, but the waging of war was still a business for warriors. As the tools of war became increasingly complex and varied, the mercenary system broke down. No king could afford to hire sufficient numbers of the various kinds of fighters needed to prosecute a war, and certainly no nation's treasury could support a standing army of professionals sufficiently large to defend the nation against attack. This military man-power problem was resolved by Napoleon, who introduced universal conscription, a social invention that very nearly won for him mastery of all Europe.

The introduction of universal conscription is generally considered to have marked the transition from premodern to modern warfare. It was as revolutionary in its consequences for warfare as the factory wage system was in its consequences to economic life. Just as the conscript system was made necessary by the new technologies of warfare, it was made possible by the fact that, under these technologies, the soldier (and to a somewhat less extent, the sailor), like the factory worker, could be trained to his special task in a comparatively short time. Military leaders, of course, still had of necessity to be professionals; but the common soldiers could now be civilians turned soldiers during times of war.

Total War.—The conscript system was the beginning of what is now described as total war. In premodern times all wars, even those of territorial conquest, were limited in scope and involvement. Death or injury by violence was ordinarily restricted to the professional combatants. Conquering forces might upon occasion attempt to exterminate a conquered people, and in some instances entire groups were put to the sword; but the destructive powers of the military were limited. Civilians could flee from conquering armies, and they usually did. Armies could burn and plunder, but they could not level the entire countryside. At any event, the civilian population of the group that sent its armies out to conquer was not personally and directly involved. Nor did war greatly affect their economic life. Once equipped, a military force tended to live off the land (a loss to the occupied regions only); and its requirements were few and simple. In combat little but blood was expended.

Even in comparatively recent times civil wars have been the only wars that have seriously affected the life of any considerable proportion of the involved populations. The wars of unification in Europe, for example, were fought between professional forces and on fields of battle rather than in the towns and cities. The wars between kingdoms, such as those between Spain and England and between England and France, were more costly in economic terms; but they still did not bring any considerable proportion of the involved populations into the struggle.

Mechanized, industrial warfare, on the other hand, has brought the entire populations of the involved nations into the conflict and has greatly extended the scope and therefore the social consequences of warfare. Universal conscription has automatically made war the concern of every able-bodied male of conscript age. The continual elaboration of the tools of warfare has gradually increased the demands of war upon the industrial and agricultural producers of the nation at war; and war has now become as much a struggle between productive systems as between forces in the field.¹ The development of long-range weapons, particularly of the bombing plane and of increasingly effective bombs, including the atom bomb, now exposes the civilian populations and their properties to destruction. In sum, the mechanization of warfare has eliminated almost all the old traditions of war; death is dealt out in a wholesale and quite indiscriminate fashion, and the distinction between civilian and soldier and between home front and battlefield no longer has any meaning. In the sense that every member of a nation engaged in war is involved and is subject directly to the loss of life or of property, modern wars are total wars.

THE SOCIAL CONSEQUENCES OF MODERN WAR

The peculiar characteristics of modern war are ignored by those who in trying to evaluate the significance of war to the contemporary world refer back to the fact that war has been a commonplace of human history. It is true, as was indicated earlier, that most of the peoples of the past have experienced war from time to time and that some peoples have lived almost entirely by warfare. But it is also true that modern wars are different in kind from the wars of the past. On the other hand, those who see each successive war as the end of civilization ignore the attributes that give strength and tenacity to contemporary civilization. The facts are, as facts generally are, varied, complex, and inconclusive.

The social costs, or losses, of a modern war are many and impressive. Proportionate to the size of the involved populations, the costs in deaths and maiming of a modern war are probably no higher than they were in former times and may actually be smaller. For one thing, the techniques of defense have more or less kept pace with those of attack. Historically, each new weapon has in time been offset by some new device of counterattack. Bombing and torpedo planes, for example, seemed early in the latest war to have rendered the battleship, once a great weapon of attack, obsolete; but the subsequent development of new anti-aircraft guns and firing controls reestablished something of a

¹ See L. Chalkley, *Technology and Economics of Total War* (American Council on Public Affairs, Washington, D. C., 1943); and H. W. Spiegel, *The Economics of Total War* (Appleton-Century, New York, 1942).

balance between ship and plane.¹ For another thing, deaths from epidemic disease are no longer so likely to be a normal aftermath of war. Moreover, the proportion of deaths in combat has been sharply reduced by modern methods of evacuation and medical treatment. These factors seem largely to have offset the increased inclusion of civilian populations in the field of battle.

Direct Economic Costs.—The costs of war in human time and effort and in material resources are, however, immeasurably greater than they were before war became mechanized. These costs may be roughly measured by the expenditure of military equipments and materials and the destruction of properties. The material expenditures and the destruction of physical properties have been rising, war by war, for upwards of two centuries. It is this fact that has led some to conclude that mankind was fast approaching the time when he would destroy all his works and reduce himself to barbarism. But although modern war destroys much social capital, stops the accumulation of capital, and greatly increases the expenditure of natural resources, some of which, like oil, are exhaustible and irreplaceable, modern societies have shown remarkable recuperative powers. Much of the work that is done by a society during the course of a war and, of course, all the materials that are used in the fabrication of war goods are a net loss. So, too, are the homes, the factories, the fields, etc., that are damaged or destroyed during the war. Nevertheless, the potential productivity of modern industrial society is so great that such losses—exhaustible resources aside—can be replaced in comparatively short order. That they are not replaced as rapidly as is technically possible is the result of the fact that war deranges the social and economic organization.

Disorganization of the Internal Economy.—During the course of a war, national production rises to unprecedented levels. In part because of nationalistic sentiments and in part because of rigorous political con-

¹The development, just at the close of this war, of the atom bomb no doubt again threw the balance in favor of the plane. The consequences to future warfare of this development are unpredictable. The prophets, of whom there is never a lack, find, according to their temperaments, that this new weapon will either bring the end of civilization or the end of war. The argument of the optimists is that the atom bomb now makes it possible for even the smallest nation to destroy the largest and that, as a consequence, no nation will hereafter dare to make a militant gesture toward another, since that other will have in the atom bomb the power to wipe out the aggressor. It should be observed that much the same prediction has been made a number of times in the past in relation to other new and terrifying weapons.

For a cautious appraisal of the possible significance of atomic energy, see W. F. Ogburn, "Sociology and the Atom" (*Amer. J. Sociol.*, vol. 51, pp. 267-275, 1946). For the views of the scientists who contributed to the development of the atomic bomb, see D. Masters and K. Way, eds., *One World or None* (Whittlesey House, New York, 1946).

trols, considerable sacrificing of normal self-interest occurs under the stimulus of crisis. A wartime system of economic values comes into operation, and workers and employers tend to subordinate their conflicts to the larger conflict of war.

The end of a war, however, invariably finds the participants in a more or less acute state of social demoralization. The monetary magic by which a nation at war finances the current war costs culminates in inflation and in increased national indebtedness. In a profit economy, such as that of the United States, inflation and public indebtedness tend to discourage production. Inflation lowers the purchasing power of the lower and middle classes (wages and salaries do not keep pace with rising costs of living), thus contracting the market for goods and consequently discouraging the production of goods. (The elaborate price and other regulations that were resorted to during and following the latest war somewhat tempered the inflationary consequences of war but at the same time established their own discouragements to productive enterprise.) The increase in the national debt, while no more than a book-keeping transaction at the time that the debt is incurred, has the effect of creating a new or a larger class of *rentiers*—people who live not by productive labor but on “income” that is indirectly derived from taxes upon wage earners and other productive persons. This tax drain upon the productive members of society itself discourages productive effort. Moreover, an additional drain on the postwar economy results from the need to make some provision for the families of soldiers who were killed and for soldiers who were maimed or otherwise rendered incapable of self-support. War, in sum, temporarily reduces the productivity of a nation and at the same time creates a variety of new leisure classes, not the least of which is the class that is composed of those businessmen and others who have managed to make an unconscionable financial profit out of the war itself. The new leisure classes thereafter draw from but do not contribute to the productivity of the nation.

There are no immediate and probably no ultimate economic gains to offset these varied war costs. Even the winner of a modern war loses economically; for there is now no possibility of securing from the defeated economic compensation for the costs of victory. Territorial gains, if there are any, may have or at the time seem to have some future military advantage. They cannot, however, add much to the productive wealth of the nation. Many territorial gains, such as the island outposts acquired by the United States at the conclusion of the latest war, are in fact economic liabilities. Moreover, the victorious nations are usually impelled by ideological or economic reasons to aid in the economic rehabilitation of those whom they have defeated. After the First World War, for example, the United States “loaned” great sums for reconstruc-

tion to defeated Germany, on the theory that an economically impoverished nation was a greater threat to the newly established peace than was a nation that was economically sound. The theory proved fallacious: the loans were never repaid; and within two decades the United States was again spending its wealth to redefeat a militant Germany that, reduced once again to defeat, once again needed to be fed and rehabilitated.

Disorganization of the International Economy.—It is largely because every modern nation is economically dependent upon the world economy that modern wars cannot be made to pay a dividend. All modern nations depend in considerable measure for their internal welfare upon the export and import of goods and raw materials. War disrupts international trade, breaks up the established system of trade relationships, and brings about new forms of international economic disequilibrium. It impoverishes formerly good customers, upsets the international financial structure, and results in a host of new and unpayable and trade-discouraging international debts. The aftermath of every recent war has been a considerable period of stagnation in international trade, during which every nation has lost the material advantage that it has normally secured from the international division of labor.

Moreover, the very fact that modern nations do from time to time go to war with one another has been a major factor in discouraging greater and more efficient world-wide specialization in production. The fear of war has led each nation to try to retain, or to attain, a considerable degree of self-sufficiency, with the result that a nation may produce within its borders many commodities that could be more efficiently produced elsewhere. Nationalistic prides and apprehensions have continually retarded the growth of international economic organization and thus have prevented the peoples of the various nations from securing the fullest possible benefits of the new techniques of production, transportation, and communication.

War and Social Organization.—The economic costs of war, great and complex though they are, are but one aspect of the social costs of war. The demands and duress of wartime conditions impose an excessive strain upon the entire social structure, a strain that results in a subsequent sharpening of the conflicts between the various groups within the nation, an acceleration of institutional and other organizational deterioration, and disillusionment and demoralization of the people. Even as the productive plant of a nation is worn by war, so the organizational structure of that nation emerges from the crisis of war weakened, its various elements more than ever at odds.¹

¹ For recent studies and discussions of the disorganizing effects of war upon the social system, see R. D. Gillespie, *Psychological Effects of War on Citizen and Soldier* (Norton, New York, 1942); S. M. Gruenberg, ed., *The Family in a World*

During the course of a war, political regulation and appeal to national loyalty tend to prevent expressions of ethnic, class, and other forms of conflict, even as circumstances are intensifying those conflicts. During the latest war, for example, American labor unions and employers called a truce in their long-standing conflict of interests. In the interests of war production, strikes and layoffs were largely discontinued. But the conditions of wartime production actually intensified the antagonisms of each group toward the other. Work was speeded up to the utmost, to the disadvantage of labor; and the quality of labor declined as young men were drawn off to the armed forces, a grievous disadvantage to employers. By the end of the war both groups were thoroughly "fed up" and were ready and anxious to turn from the battle with the common enemy to doing battle with each other; strikes spread throughout the nation; employers, fat with war profits and protected from loss by certain oddities of corporation taxes, took a belligerent stand toward labor's demands for higher wages; and industrial reconversion was delayed by at least a year. Nor was this sharpening of labor-employer conflict confined to the United States. In all the nations of the world, with the possible exception of Russia, work stoppages were a common postwar phenomenon.

The pent-up tensions that accumulate during the course of a war are often released in sudden and violent ways. Not only strikes and boycotts but also race and other forms of rioting and even mass movements of one sort or another, such as the reactionary Ku Klux Klan movement that followed the First World War, may occur. In the defeated nations hunger and despair increase the inevitable tensions of wartime stress and repression, and violence may then rise to revolutionary proportions.

Institutional and other forms of social organization are always badly strained by the exigencies of war. The family, that is, what is left of it, suffers as a consequence of the fact that war separates many husbands and wives, encourages hasty and often ill-considered marriages, and prevents many parents from providing the parental supervision that they would otherwise give their children. For many reasons, including the forced separation of young men and women and the general sense of personal irresponsibility that is induced by the insecurity of wartime, a marked relaxation of sex morality occurs in a nation at war. Invariably

at War (Harper, New York, 1942); E. C. Hughes, "The Impact of War on American Institutions" (*Amer. J. Sociol.*, vol. 48, pp. 398-403, 1942); H. Mannheim, "Crime in Wartime England" (*Ann. Amer. Acad. Polit. Soc. Sci.*, vol. 217, pp. 128-137, 1941); W. F. Ogburn, ed., *American Society in Wartime* (University of Chicago Press, Chicago, 1943); W. C. Reckless, "The Impact of War on Crime, Delinquency, and Prostitution" (*Amer. J. Sociol.*, vol. 48, pp. 378-386, 1942); G. Saenger, "The Effect of the War on Our Minority Groups" (*Amer. Sociol. Rev.*, vol. 8, pp. 15-22, 1943); and W. Waller, ed., *War in the Twentieth Century* (Dryden, New York, 1940).

the delinquency rate of girls rises, as does the incidence of venereal diseases and the illegitimate birth rate.

During the course of a war, moreover, crimes against the state become the norm rather than the exception.¹ The growth of war-occasioned political restrictions and the increased demands for personal sacrifice place a tremendous strain on the citizen's respect for the law. However loyal most may be in the abstract to the war effort, many resent and violate the restrictions that are intended to further that effort. In every nation "black markets" flourish during wartimes; and, as the number of restrictions upon food and other commodities increases, the level of compliance with the law tends to fall. At the same time government itself tends to grow if not more corrupt, at least less efficient. The military take over control of much of the productive machinery and organization, and their ineptitude makes itself felt throughout the entire economy. The many new and unprecedented civil agencies that are hastily established to deal with the new wartime problems are often staffed with men of little experience or with men who come into government service only to protect the interests of special groups. These agencies, like the military, are granted enormous powers, which they do not always employ wisely or honestly. Moreover, the wartime urgency for action generally leads politicians and political agencies to think that any action, however ill-considered, is better than no action at all. For these and other reasons, wartime governments are proportionately less efficient than are those that have to deal only with the problems normal to peace. Characteristically, there is a popular revulsion against governmental controls and agencies during the early postwar years and, in democratic nations, a disposition to turn at the first opportunity against the political party that happened to be in power during the war.

War and Nationalism.—The one aspect of contemporary social life that is strengthened rather than weakened by war is nationalism. Although in the immediate postwar period there is usually a strong "morning-after" distaste for war and all things associated with war, each war in turn has intensified nationalistic sentiments and ideologies and added to the legends and military hero worship that are the cultural basis for the state as an in-group. There has been much discussion during the course of recent wars concerning the prevention of a subsequent war; and this has twice led to the establishment of an international agency that, it was hoped, would subordinate nations to the interests of world peace and make possible a growth of international political organization in keeping with the internationalizing tendencies inherent in modern technology. But after the First World War the people of each nation,

¹ See H. Lever and J. Young, *Wartime Racketeers* (Putnam, New York, 1945).

even of defeated Germany, tended for a while to turn inwards and to withdraw in fact if not in fiction from too much participation in the world at large. And contrary to expectations, the same tendency promptly appeared after the termination of the Second World War. Since modern wars are wars between nations, people come after each war to associate war not with the existence of nationalistic in-groupings but with the fact that as a nation they have come into contact with other nations; and thus they seek freedom from war through a strengthening of nationalism and attempted independence from the other nations of the world. That this intensification of nationalism but hastens the coming of another war is a fact that has consistently been ignored.

THE IDEOLOGIES OF WAR AND PEACE

Far more is spent by modern states for war than for roads, public services, doles, economic subsidies, and other things that might possibly contribute to the welfare of their citizens. There is no event that is more disruptive to the normal lives of people than the advent of a war; and there is no greater barrier than recurrent war to the full utilization of modern techniques for producing the goods and materials that men desire. And yet there is no aspect of contemporary life that has been subjected to less real scientific study and that is more obscured by folklore, philosophical musings, and traditional ideologies.¹

The Great (or Evil) Man Interpretation.—The simplest and most dramatic of the interpretations of war is that which places responsibility for the outbreak and conduct of a war on the shoulders of one man, the recognized leader of the nation that has or is claimed to have precipitated the conflict.² He is the embodiment of evil to his opponents, the embodiment of the nation's hopes and aspirations to his supporters. This personal interpretation of the causes of war is characteristic of all early and much contemporary historical writing and is basic to all wartime

¹ The literature on specific wars—reports on and discussions of battles, histories of the course of a particular war, and attempts to assess the role of specific leaders in the making and resolution of a specific war—is tremendous. About all that is now known regarding war in general, *i.e.*, war as a social phenomenon, has been assembled and presented in a two-volume work. See Q. Wright, *A Study of War* (2 vols., University of Chicago Press, Chicago, 1942).

² At the conclusion of the Second World War the victorious allied nations applied this interpretation, slightly extended to include Nazi party leaders and German and Japanese generals and admirals and slightly moderated to avoid the inclusion of Emperor Hirohito, in the war-guilt trials. There was some discussion concerning the role of the German and Japanese people as such in the making of the war, but in the end it was decided that it is impossible to indict an entire nation; so only the leaders—or such of them as were available—were held legally responsible for the war. This twentieth-century interpretation of the causes of a world-wide war compares favorably with such premodern folk practices as that of attributing an epidemic to the evil spell cast by some vicious person.

propaganda. It is a special application of the folk version of social causation. According to it, Napoleon was the evil genius who caused all the havoc and desolation of early nineteenth-century Europe; Kaiser Wilhelm, the "Butcher of Berlin," brought about the First World War; and Hitler the madman incited Germany to a career of bloody conquest in 1939.

The role of individual men, great and humble, in the making of historical events will be considered in the following chapter. That no single man can of his own volition bring about a war should, however, be apparent. The personal interpretation of war is no more valid than is the personal interpretation of any social phenomenon. And all proposals to abolish war by the execution of the person or persons supposed to have caused a given war are therefore fatuous.

The "Bad Blood" Version.—Slightly more complex but no more valid is the idea that wars are caused by the evil genius of an inherently warlike people. This idea is the national parallel to the racial version of ethnic differences. From it springs the proposal, often advocated during the course of a war but never put into effect, to prevent future wars by exterminating the people (e.g., the Germans and the Japanese) who initiated a given war. A mere cataloguing of the peoples who over the centuries have been militant during one period in their history and who thereafter ceased to be a threat to the peace is sufficient to disprove the belief that "bad blood" is the cause of war. The Swiss were the terror of Europe during the fifteenth century; Spain was unquestionably the most militant power in western Europe during the sixteenth; Britain and France shared the honors during the seventeenth and much of the eighteenth, after which France under Napoleon became the great warmaker on the Continent. Not until late in the nineteenth century did the Germans (long embroiled in their own wars of internal unification) find their manifest destiny in the conquest of other nations. Either "bad blood" becomes purified in the course of time and need not therefore be let so that future war may be prevented, or there is nothing to the theory that some nations are inherently warlike. That at various times various nations have been exceedingly militant is obvious, but that this militancy has anything to do with the biological characteristics of the people of those nations is patently false.

Justifications for War.—In recent years all nations that have been preparing to make war upon other nations, as Germany and Japan were doing in the years just preceding the outbreak of the Second World War, have felt impelled to justify their undertaking. This need to justify the making of war would appear to be a fairly modern thing and to arise from the fact that there is a strong and widespread feeling that war is bad, a feeling which is itself a peculiar product of modern Western cul-

ture and which is a direct contradiction of the nationalism that occasions modern wars. The Greeks, the Romans, the Moors, many primitives, and all feudal peoples considered war and the making of war a normal part of social life. The making of war no more needed justification than the killing of animals for food or the wearing of shoes, if shoes were worn. But at least since the time that Britain and France became great powers and, their own wars of conquest done, proponents of peace, those nations who have challenged the international *status quo* have been ideologically on the defensive; and their spokesmen have advanced various justifications for the proposed attempts to change the international structure by military might. All of these justifications fall into one of two general categories—the drive of economic necessity and the force of manifest destiny.

The Have-not Argument.—Prior to the latest war, the German and Japanese ideologists made much of the fact that as nations they were “have-nots.” They had large and constantly increasing populations and great skill and ingenuity but few material resources. In contrast, some nations—e.g., Britain and the United States—had vast territorial possessions, comparatively small populations, and little inclination to exploit to the fullest the resources under their control. The result of this international maldistribution of the world’s wealth was that some nations lived in wealth and idleness, while more deserving nations, such as Germany and Japan, worked hard and lived in poverty. War was the only means by which this intolerable state of international affairs could be corrected.

This economic justification for the making of war has been attractive to the people of nations preparing for war in that it promises them quick and easy profits. And it has often gained the sympathetic support of the professional sentimentalists in other nations, at least up to the time when those other nations have become involved in war. Prior to 1940, for example, many people in Britain and America believed that Germany and Japan deserved a larger share of the world’s wealth and that if Germany and Japan could not secure it otherwise, they were justified in taking that share by force.

It cannot, of course, be denied that the nations of the world occupy or rule over territories of widely varying sizes and natural resources and that the standards of living of the peoples of the several nations differ greatly. The territorial division of the world has come about by historical accident and incident, including conquest, rather than by logic or in accordance with some abstract principle of economic justice. But the have-not argument ignores three facts. The first is that poor and impoverished peoples cannot set out to conquer the world. The making of a modern war is not a poor nation’s business. It is an affair so costly in

material goods that only the fairly well to do can afford to undertake attack upon their neighbors. Actually, therefore, it is not the have-nots but those nations that are ambitious to have more than they happen to have, whether it be territories or natural resources, who set out to make war. The second fact ignored by the have-not argument is that the standard of living of a people is determined not alone by the size and natural wealth of their territorial holdings, but also by the level of the technology, the efficiency of the social organization, the ratio of population numbers to total productivity, etc. As a consequence, some relatively small nations, e.g., Sweden, Norway, Denmark, and Switzerland, have an exceptionally high standard of living. Neither Germany nor Japan were actually poor countries; as a matter of fact the prewar Germans enjoyed a higher standard of living than either the Poles or the Russians, whom they attacked. But in any event, had the Germans and Japanese applied themselves as effectively to the production of consumption goods as they did to preparations for war, they could have been rich indeed. As it is, they are at the moment abysmally poor; for the third fact that they ignored, and the one that they had hoped to change, is that for at least the past century and a half no nation has been able to improve its economic welfare via war; every nation that has attempted to do so has lost and lost heavily.

The Manifest Destiny Argument.—Often interwoven with the have-not thesis is the claim that the nation is destined by God or by nature to rule the world or that part of the world that the nation proposes to conquer. This is, of course, the traditional in-group "best people" concept extended to include a national population. With the British in India and elsewhere it took the form of the "white man's burden." By the Germans, and in their wake the Japanese, the manifest-destiny thesis was developed in two different directions.

The one version, intended apparently for the common folk, was the assertion that the Germanic "Aryan" race (in Japan, the subjects of the Son of Heaven, sometimes known as the Asiatic Aryans) was composed of supermen who, under the leadership of that super-superman Hitler (in Japan, Hirohito), were about to fulfill the destiny for which they had been specially created. Since they had been born to rule over the lesser peoples, these supermen were hardly responsible for the fact that they were forced to war by the stupid reluctance of these lesser peoples to submit to the master race. The second version, apparently directed toward people of scientific pretensions, was a pseudoscientific claim that geographical forces impelled the German people to become, through warfare if necessary, the political masters of all Europe (the Japanese, of all Asia). This doctrine, known as geopolitics, was discussed in an earlier chapter. It is but a specialized application of the old and dis-

credited theory that the physical habitat determines the social history of peoples.

The Social Profit Concept.—Somewhat distinct from the ideological justifications for making war are the attempts of historians and others to find some small social profit in the wars, justifiable or not, that do occur. Of these the most impressive, if also least valid, is the claim that the crucible of war "purifies" a nation, although how and of what is never very clear. Nations, it is often said with a fine disregard for history, deteriorate from too much peaceful living; and an occasional war strengthens the body politic and cleanses the blood of the people. The latter idea may be derived from the ancient Spartan belief that physical hardship per se is good for man; or perhaps it is just an application to the nation of the old medical idea that bloodletting draws off the impurities of the body. In some of its modern forms, this belief is given Darwinian "struggle for survival" implications. Thus war between nations, as well as other modes and forms of conflict, is regarded as a struggle for survival; and the winner of a war, the survivor, is seen as the strongest and best nation, which in the course of the struggle grows even stronger than it was. In fact, however, the defeated as well as the winner survives. Nations do not die; they live on, perhaps to fight again. And war does not kill off the old, the feeble, and the incompetent and thus strengthen the population of the nation; in the main it kills off the young and the strong.

Some of the apologists for modern war see in war the major stimulus to technological advance. However costly in human and economic terms a war may be, they say, the future benefits of the technological developments that have been brought about during the war crisis make war worth while. This argument might possibly have had some validity prior to the nineteenth century. Today, however, technology is so complex that it can no longer be advanced by empirical methods. Since it is for the most part dependent upon pure science, it can advance only as new scientific findings accumulate. And war is not conducive to scientific labor. The urgency of the needs for new and improved weapons discourages the pursuit of long-range and uncertain pure-science projects. Scientists tend to become technicians, helping to speed practical applications of the scientific findings already at hand, but not in any significant measure increasing the stock of scientific findings. At the same time the training of future scientists diminishes, and in many instances the younger scientists of the nation are put into uniform and expended on the battlefield. (In part because of the shortsighted policy of the government, costs of the latest war to the United States included a full generation of scientists. Britain, having lost a considerable proportion of its scientists in

the previous war, maintained scientific training and kept young scientists at home; but, with the possible exception of Russia, the war placed a heavy drain on the scientific personnel of all the other nations.) What happens, then, during the course of a modern war is that each nation draws upon the existing store of knowledge at an unprecedented rate—just as it draws excessively upon other resources, material and human—without, however, adding to that stock.¹ Although war accelerates technology in some fields to some extent, it at the same time induces a scientific holiday and is, in the long view, just so much lost time. Little is invented or discovered during the confusion and haste of a war period that has not already been in prospect and would not have come into use when peacetime circumstances warranted.²

NATIONALISTIC WAR AS A CULTURAL LAG

The factors that actually enter into the making of modern wars between nations are many and varied. None of these factors are, as the warmongering ideologists usually claim, inescapable nor, as the peace planners always assume, subject to easy and direct control.

Nationalism, Ideology and Reality.—The underlying basis for all modern wars is the marked functional disequilibrium between the political organization of the various peoples of the world and their economic and other relationships. As was indicated earlier, eighteenth-century nationalism operated to bring to an end the process of political unification that had begun as a response to technological and other changes in Western culture. The perpetuation of nationalism has since then prevented any significant expansion of the state as a unit to meet the needs of the rapid and revolutionary technological changes that have been occurring. We live, in other words, in a twentieth-century world that is politically subdivided in terms of eighteenth-century conditions; and the resulting

¹ For a fuller discussion of the way in which wartime demands use up the existing stock of scientific knowledge, see M. H. Trytten, "The Impending Scarcity of Scientific Personnel" (*Sci. Mon.*, vol. 50, pp. 37-47, 1945); and I. I. Rabi, "The Physicist Returns from War" (*Atlantic Monthly*, vol. 176, pp. 107-114, 1945).

² The wartime discovery of a method for releasing atomic energy may possibly be an exception. The American project cost something like two billions of dollars, and certainly no comparable sum could have been applied to this endeavor during times of peace. But the scientific knowledge that made this technological development possible had all been accumulated before the war; and the expectation was that, in due time, and probably at a fraction of the wartime cost, methods would have been devised for releasing atomic energy.

Many things that are generally supposed to have been invented during time of war actually were not. Thus DDT (dichloro-diphenyl-trichloroethane), the great public health development of the Second World War, was first synthesized by O. Zeidler in 1874 and put on the market as an insecticide by a Swiss company in 1940. The war only encouraged the adoption of this insecticide by the American military, who were faced with a lack of the standard spray materials.

stresses within and between political units culminate from time to time in overt conflict, in war.¹

The size and the composition of a modern state are products of historical accident and now have little functional relation to technological, economic, and other aspects of society. The boundaries of a nation are arbitrary and often cut across ethnic and other cultural lines. There is, for example, no reason why the peoples of North America should be divided politically into Canadians, Americans, and Mexicans. But historical accidents have chopped up the peoples of North America and elsewhere into nations; and national sentiments have so far precluded all efforts—military and peaceful—to unite in one over-all political organization all those peoples who are by reason of economic or other factors interdependent. Whether the time will ever come when the barriers of nationalism will break down and durable forms of international political organization will develop cannot be foretold. For the past century and more the trend has been continually in the other direction. Peoples who were in no wise nationalistic, such as the Chinese, have of late had to develop nationalistic sentiments and loyalties in order to survive politically in a world of nations; and the evidence at hand indicates that Soviet Russia, for a generation interested in the internationalization, as well as communization, of the peoples of the world, has now become nationalistic in self-defense. It does, however, seem evident that until and unless nationalism gives way to a more moderate political ideology and some sort of international political unity develops, there will be constant conflict between nations that will from time to time culminate in war.

The Military Tradition.—A vital aspect of the nationalistic basis for modern wars is the cultural sanctioning of war as a means of settling disputes between nations. Most modern peoples profess a strong distaste for war. During times of peace, most of the peoples of the world do in fact give evidence of marked disapproval of war in all forms. During peacetime, for example, service in the nation's armed forces is commonly looked upon either as an irksome duty (as has been the case with French conscripts) or else as a refuge for lazy and unambitious men (as has generally been the case in Britain and the United States). Even during the course of a war, the soldiers and civilians of most of the nations involved have looked upon the war as an unpleasant interruption of normal life.

Nevertheless, the military tradition, so much a part of feudalism, has survived in all modern societies. During times of peace, the wars of the

¹For two attempts to analyze these stresses, their organizational antecedents, and their role in the making of war, see L. L. Bernard, *War and Its Causes* (Holt, New York, 1944); and Q. Wright, *The Causes of War and the Conditions of Peace* (Longmans, New York, 1935).

past have quite generally been romanticized. Nationalistic history—the sort that is everywhere taught to school children—glorifies the nation's warriors and the wars that they have won. In this and in a variety of other ways, military values and an acceptance of war are perpetuated in latent form, to be aroused and focalized upon an enemy when war does occur. If the military tradition were not maintained as an integral part of modern societies, such normally peaceful nations as Britain, Russia, and the United States could not possibly have been able to defeat such clearly militant nations as Germany and Japan.

As long as any one of the major nations of the world remains militant—and this probably means as long as there are nations—all the others must preserve their military traditions if they are to survive as politically independent units. Likewise, those peoples, such as the Chinese, who are by tradition nonmilitary must cultivate the military values and techniques if they are to become nations and remain independent. In the very long run, the pen—knowledge—may be mightier than the sword. But nations, like the individuals who compose them, live in and by the short run.

The Predatory Ideal.—Neither nationalism nor the military tradition is of itself sufficient to account for the prevalence of war in the modern world. Both are, in a sense, passive conditions that permit but do not of themselves promote the occurrence of war. The precipitation of war is traceable to another and equally complex cultural factor—the predatory ideal. As was mentioned earlier, under premodern conditions of life some societies were able to live by theft rather than by productive labor. To the members of these societies to rob, to plunder, and to conquer were all in the day's work. In the Western world military predatism seems to have reached its highest development under the Romans. The heroes of Rome during the empire period were the military leaders who conquered and subjugated non-Roman peoples, from whom tribute could thereafter be extracted. Roman society was imbued with the idea that the way to wealth is via arms and that the greatest of men is he who leads his people to the conquering of other peoples.

The predatory ideal was perpetuated in miniature through the feudal system; a superior lord was one who won wars with other lords, sacked their castles, and robbed them of their stores. The ideal was revived on a grand scale by Charlemagne, who apparently saw himself as a new-day version of the Roman Caesar. Since the time of Charlemagne there has been a succession of aspirants for the title of Caesar in western Europe, and first this and then that people has become enamored of the idea of becoming the heart of a new and equally predatory empire. The Germans and Italians were only the latest of these. And in recent years the predatory ideal spread to, or was developed by, the Japanese in the Asiatic area.

War as an Alternative to Social Reconstruction.—The predatory ideal seems to have served many political leaders and their followers as an alternative to functionally effective internal organization. There are two ways to individual wealth—producing what the society values and will pay for and taking wealth from those who have already acquired it. Likewise there are two ways open to nations. A nation with a highly integrated and efficient socioeconomic system makes the most of its physical resources, however limited, and so earns for itself a comparatively high standard of national well-being. Thus, as was mentioned earlier, some nations, such as Switzerland, Norway, Sweden, and Denmark, have made much of little. Other nations, such as Britain and the United States, by historical happenstance possess much of the earth's resources and can therefore secure equally high or even higher standards of national well-being with relatively less effective social organizations. But some nations, such as Italy, Germany, Japan, and most of the Latin American countries, have, mainly because they became affected by modern techniques later than the others, neither efficient socioeconomic systems nor compensating natural resources. They are thus faced with the alternatives of accepting a low standard of national well-being, of developing modes of organization appropriate to the new technologies (and, in most instances, of introducing the checks to population growth without which no nation can for very long maintain a higher-than-subsistence standard), or of attempting to acquire by force the resources that would make up for their social incompetence. The development of new functional patterns of social organization is necessarily a slow and laborious process. When, therefore, the ambitions of such a nation exceed its willingness or ability to work out such new patterns, its leaders may be tempted to offer and its people to accept a military short cut to wealth and power.

Napoleon, for example, rose to eminence in a France that was demoralized by the first phase of a revolutionary attempt to create a social order more fitting to the times and hence more productive of the things that men desire. He offered what promised to be an easier and was certainly a more exhilarating way to wealth, the way of the Romans. In modern Italy, Mussolini found the appeal of predatory nationalism a more effective way to personal power than the program of socialistic reconstruction that he originally represented. The failure of the German Republic to develop an equable and efficient socioeconomic system made possible the rise of Hitler and a revival of militant nationalism. And in Japan, too, the adoption of the predatory ideal was an easy alternative to the development of a modern substitute for the essentially feudal structure of Japanese society.

The fact that no modern nation has yet made a successful conquest of its neighbors and that in view of the economic interdependence of mod-

ern peoples there can be no real profit even from successful conquest does not seem to have dimmed the luster of the predatory ideal. It may be expected that this ideal will in due time again be revived and offered to the people of some nation as a desirable substitute for the slow and arduous processes by which the disequilibriums within the nation can be rectified.

Wars between nations are not, it should now be evident, an independent or isolatable social phenomenon. They express, on the one hand, the world-wide disequilibrium that exists between increasing economic and other forms of internationalism and persistent, and perhaps intensifying, political nationalism. The nations of the modern world are in irresolvable conflict with one another, for nations and nationalism are ideological and organizational contradictions to the productive techniques and procedures that such tangible modern devices as the automobile, the steamship, and the airplane represent. The precipitation in war of the underlying conflicts between nations is, on the other hand, an expression of the disequilibrium within the nation or nations that endeavor through military conquest to gain wealth and power. And this internal disequilibrium, like that which exists on the international level, is largely a product of the failure to adapt social forms, political and otherwise, to the requirements imposed by the new technologies. In the long run, then, many fundamental social changes must occur within and between all the nations of the contemporary world before the prospect of future wars will be significantly reduced. The processes by which such changes come about, of which war itself is not one, will be discussed in the following, the concluding, chapter of this book.

Chapter XX

EVOLUTION, REVOLUTION, AND THE MASS MOVEMENT

THE forms of social differentiation that have been discussed in the preceding chapters account for much of the conflict and some of the changes that occur in contemporary societies. Conflict between socially determined in-groups and out-groups—ethnic, class, occupational, national, etc.—is, however, an expression of social disequilibrium rather than a major process whereby social disequilibrium is corrected; it does not, therefore, invariably lead to social change. An ethnic minority may become subordinated by or assimilated into the majority without any considerable effect on the culture of the majority. The American Indians, for example, contributed much to the making of American history but very little to the making of American society. Likewise, wars between nations may bring no significant change in international conditions. The First World War was an historical event of great magnitude and the prelude to the Second World War. It no doubt marked a change in the status of the various nations; but, early hopes to the contrary, it did nothing to ameliorate the conditions that make for wars between nations.

There is, however, one order of social differentiation that serves in the long run to bring about a better functional equilibrium between the various groups within a society and between a society and its social context. This is the differentiation of the members into those who want things to stay as they are and those who would endeavor, in some way or other, to bring about a change or many changes in the *status quo*. Differentiation of this order is a product of and a correction for social disequilibrium. It begins with the detachment of one individual from some aspect of his society; and upon occasion it grows, almost individual by individual, to the magnitude of a revolutionary or fanatical break with the *status quo*. There is then a sharp group distinction between those who cling to the established forms of social life and those who veer away from them, and considerable conflict on this basis may subsequently arise.

INDIVIDUAL DEVIATION AND SOCIAL EVOLUTION

In every society and within the membership of every social group there have been, it will be recalled, some individual deviations from the established norms. The individual hunter was more or less skillful than

was typical of the members of his tribe; or he was more or less brave, more or less fleet of foot, more or less ambitious, more or less disposed to follow the traditional hunting techniques, etc. The individual feudal lord was not as a person in all respects typical of feudal lords. He deviated in some or many respects and in small or large degree from what was typical of his kind in his society. And so, too, have the serf, the king, the peasant, the craftsman, and all the other kinds of persons in all societies down through the ages.

Within a functionally effective social system individual deviations are minor products of the accidents and incidents of socialization and do not jeopardize the maintenance of the *status quo*. Most if not all of the groups of which such a society is composed socialize most of the incoming members of the group into reasonable conformity with the group norms; and those who are not adequately socialized are so few and deviate in such widely varied ways that they cannot possibly constitute a group apart from and opposed to the majority. At the worst they are annoying crackpots; at the best they provide the community with its amusing characters—the village drunkard, wife beater, braggart, or eccentric. Individual deviations of this order may lead to conflicts between individuals or to exceptionally good or bad performances of established practices, but they have no more effect on the group norms than a bad performance by one actor has upon the play in which he is appearing. There have no doubt been thousands of inept and some superlative Shylocks; but as a play *The Merchant of Venice* is still very much what it was when Shakespeare wrote it. And thus it is with the culture of stable social groups. The black sheep may violate the norms of family life without changing those norms; the exceptional son may by diligence and skill increase the family wealth without affecting the system of family life.

Social Disequilibrium and Initiative.—Under conditions of social disequilibrium, on the other hand, when the functional effectiveness of the society is disturbed, individual deviations from the norms are reflections of the functional inadequacy of those norms and may lead to changes in them. The disorganized social system fails in increasing measure to socialize its incoming members; it produces an ever-increasing number of misfits—individuals who are more or less motivated than is normal for the group, who are more or less disinclined to adhere to some or many of the group norms, or who have acquired more or less unconventional modes of conduct and atypical sentiments, values, beliefs, etc. Many of these individuals further the disequilibrium that produced their deviant attributes without doing anything to modify the social structure. The discontented serf or slave or factory worker may simply be a poorer than average worker, more slothful and incompetent but otherwise in-

distinguishable from his fellows. Such a person is much like the tenant who lets the house fall into further disrepair because he dislikes the house anyway.

Only a few, those who have acquired along with their discontent some initiative, will contribute to the working of changes in the norms of group life. As the feudal system became more and more incompatible with changing technology, more and more serfs no doubt became discontented with their feudal status. But only those who had the initiative to escape from the manors and strike out for themselves in the towns actually contributed to the rise of medieval forms of social life. Similarly, many of those who worked in the early factories were no doubt discontented with their status as wage slaves; but only those who had the initiative to contribute to the rise of labor unions—either as innovators, organizational leaders, or, at least, pioneering members of unions—entered into the making of significant social changes.

Even under the extremely dynamic and highly disorganized conditions of modern societies there are few individuals who are capable of making significant changes in their societies. The modern American home, for example, produces a high proportion of disgruntled and poorly socialized children. Many of them will never resolve their dissatisfactions; they will continue to be more or less passively maladjusted throughout their lives.¹ Some will escape what are for them distressing realities by shutting themselves off from those realities, and the more successful of these will be labeled psychopathic and put away in institutions for the insane. Some will escape realities temporarily by joining a mass movement of one sort or another, and they may thereby contribute in a very roundabout way to the making of social changes. Most of those who do succeed in working out an adjustment to the realities of their society will do so by reconciling themselves to things as they are. In this they may be aided by priest, psychoanalyst, or understanding wife. However they may achieve it, their adjustment will constitute subordinating themselves to the disorganized system that originally produced their discontent. Only the remainder, a small proportion of the socially maladjusted products of the American home, will in any way or to any degree change society to fit their own ideas of how things should be.

Individual Deviation and Social Evolution.—All the important and enduring social changes in whatever aspect of a society occur through a gradual increase in the number of individuals who, in response to some aspect of social disequilibrium, acquire sufficient initiative either to work out or to adopt some new form of conduct. The process by which in-

¹ For an analysis of the nature of personality maladjustment and of the conditions in contemporary American society that produce it, see K. Young, *Personality and Problems of Adjustment* (Crofts, New York, 1940).

dividuals are detached from or fail to be attached to an old group norm so that ultimately a new norm is achieved is usually termed social evolution.

Social evolution parallels the biological process by which new organic forms evolve; but it involves a development of new modes of human behavior, not a change in the inherent attributes of the members of the group. The invention and adoption by more and more members of a social group of some new modes of individual behavior is roughly analogous to the biological mutation and selective survival by which new forms of organic life develop. Moreover, the general direction of social evolution, like that of biological evolution, is toward more effective adaptation. In the long run all evolutionary changes in society lead to greater social equilibrium—toward, for example, a form of group organization that is functionally more appropriate to some new technique or some new circumstance in the physical or biological habitat.

Evolutionary change is, however, the antithesis of the proposals for change that are from time to time advanced by utopian ideologists. Utopian proposals—such, for example, as Marxian socialism, the Nazi National Socialism, the Japanese East Asia co-prosperity sphere, or the campaign platform of any political party—are proposals for a rapid and over-all change in the social system, one that will take place according to plan and under the direction of some designated leader or clique of leaders. Evolutionary change, on the other hand, is piecemeal and unsystematic; and it occurs at an erratic rate. It is what was described in another connection, and with attention on the very long run, as cultural cumulation.

In the process of evolutionary change, one small facet of the circumstances that produce social disequilibrium is corrected by the adoption of a new and functionally more adequate practice—technological, ideological, or organizational. The evolution of this new practice may in turn intensify the disequilibrium of some other area, hastening the time when a change will occur there. This evolutionary rebuilding of a society is slow and costly. The "part" that is redesigned with so much labor so that it will function better in the context of the society must be redesigned over and over as modifications of the other "parts" of the society occur. Nevertheless, slow and costly though it is, social evolution is at present the only certain way by which a dynamic society can move in the direction of greater functional equilibrium.

LEADERSHIP AND SOCIAL CHANGE

All societies distinguish in one way or another between the few who lead and the many who follow, between the elite and the common people, the patriarch and his children, the officers and the soldiers, the managers

and the workers, the teachers and the students, etc. In each instance the leaders are distinguished from their followers by status, by knowledge, or by skills. All those who are thus socially defined as leaders do not, however, contribute to the making of social change. In some instances, as a matter of fact, the socially defined leaders actually impede the process of evolutionary change.

Status Leaders.—In a relatively stable society and in each organized group within such a society leadership is a categorical and often hereditary matter. The individual who happens to occupy the role of leader is a leader by virtue of his status. As a person he may or may not be wiser, kinder, or shrewder than his followers. But as a king he can do no wrong, as a father he is always right, as a priest he is a man of God, and as an officer he is a gentleman by act of Congress. In general, status leaders are no doubt better qualified as persons to lead the group than are other members of that group. But their authority stems from their status rather than from their personal abilities.

The Folklore of Leadership.—The authority of a status leader is a social grant. As long as he stays within the confines of his designated role, he is obeyed more or less without question, and his word is accepted as law. Underlying the acceptance of the authority of the leader is an ideology of leadership that is found in one form or another in all societies. It involves two related beliefs: first, that the designated leader has personal abilities transcending those of all other men; second, that it is by adhering to the dictates of the leader that all difficulties, great or trivial, can be overcome.

The ideal of the leader as a superman is most clearly revealed in the practice of hero-worship. All peoples, literate and preliterate, have had their stock of legendary heroes.¹ These are the men who are supposed to have brought about all the great and good things of the past—to have won the wars, founded the society, invented its institutions, etc. The legendary hero is in fact a personification of forces too complex and intangible for the folk to comprehend or to retain in the "group memory," even if they could comprehend them. And just as the social past is interpreted in terms of heroic persons, so the social present is believed to be caused by the persons who are currently leaders. If things go well, the leader is acclaimed; if they go badly, he is blamed, and the superman becomes the supervillain.

The practice of relating current events to leaders has not disappeared, although it has been somewhat tempered by the rise of modern science.

¹ See E. R. Bentley, *A Century of Hero Worship* (Lippincott, Philadelphia, 1944); S. Hook, *The Hero in History* (Harper, New York, 1941); and P. Meadows, "Some Notes on the Social Psychology of the Hero" (*Southwestern Soc. Sci. Quart.*, vol. 26, pp. 239-247, 1945).

Few educated modern people think of physical and biological phenomena, such as earthquakes or crop failures, in terms of such "persons" as gods and devils. They may, however, think of social phenomena in terms of status leaders, which is only a somewhat more complex version of the same process. Thus even in this enlightened age, if the war goes well, the general is acclaimed a hero; if the war goes badly, he is adjudged incompetent. If business prospers, the President—and numerous other leaders, political and otherwise—may be granted the credit; if an economic crisis arises, they will certainly be charged with ineptitude, if not corruption.

Associated with the idea of the leader as a superman (or, upon occasion, a supervillain) is the belief that it is via the leadership of supermen that social difficulties are to be surmounted. Individual initiative and self-reliance are perhaps the rarest of human attributes; they are rare even in a highly dynamic society such as our own. Men are everywhere and at all times mainly subservient to their culture; and when that culture fails them, they are prone to turn to some other source of authority, first and usually status leaders and, that failing, to someone who has usurped the authority once held by status leaders. All people have, for example, their god or gods, who are but abstract status leaders to whom men turn in times of trouble. So great is the reliance of men upon the authority of their gods, that far more time is even now spent in praying for rain than in the construction of irrigation systems.

Status Leaders and Social Change.—In a relatively stable society status leaders aid in keeping the social system in a state of equilibrium by guiding their followers in adherence to the established forms and by balancing out the minor forces of disturbance by applying culturally standardized solutions to the problems that arise from time to time. Under conditions of social disequilibrium, however, status leaders operate to delay social changes. Their role is then reactionary; they use their traditional authority to perpetuate old practices and to resist the invention and adoption of new ones. Every modern society has its heritage of status leaders—the decadent aristocrats; the old-guard politicians; the landed gentry; and the reactionaries in art, morals, technology, ideology, etc. Their authority rests upon the fact that once upon a time their sort were the protectors of the established ways. They now appeal to old and declining sentiments, to old values and beliefs, and to the folk view that is often summed up in the phrase "what was good enough for Father is good enough for me."

When status leaders succeed, usually with considerable resort to coercion, in retaining their full authority under conditions of social disequilibrium and in preventing evolutionary modification of the social system, the social drives for change pile up behind the authority of the status leaders like water behind a dam until they ultimately burst forth

in revolutionary violence or mass hysteria. These social explosions will be considered shortly. The resistance to change that is put up by status leaders may, however, merely retard rather than prevent evolutionary changes. Their resistance may then serve the useful social functions of discouraging the diffusion of the more impractical social innovations, of slowing the spread of those that ultimately prove effective and thereby lessening the shock of change, and, most important, of forcing the proponents of change to demonstrate the validity of their claims to leadership. Even in times of acute social disequilibrium, such as the present, reactionaries are not, therefore, the unmitigated evil that radicals make them out to be.

Creative Leadership.—Status leaders contribute to the making of social changes in a negative way at most.¹ Positive contributions to evolutionary changes come from creative rather than status leaders, individuals who invent or aid in the diffusion of new techniques, ideologies, or modes of social organization. Although creative leaders may for convenience of analysis be divided into those who invent and those who promote what others have invented, the distinction is not categorical. The inventor of a new device, technological or otherwise, may do much to encourage its adoption; and the promoter of a new device may aid in its refinement. Ordinarily, however, rather different personality attributes are involved in these two phases of the evolutionary process and they are therefore not often embodied in one person.²

Leadership Through Innovation.—As was indicated in an earlier chapter, everything that is new in a society begins as an invention or discovery by some individual. The invention or discovery is usually the product of endeavor that stemmed from personal dissatisfaction with some aspect of things as they are. Occasionally a man who is dissatisfied with his social or economic status may seek wealth or prestige through the invention or discovery of something new. The process of technologi-

¹ A given member of the British Conservative Party may, of course, upon occasion leave his reactionary role and vote for progressive legislation; a stern father may have his fling outside the home; and a preacher may advise a single member of his flock as a wise man rather than as a man of God. Conversely, the physicist who is an adventuresome radical in the realm of physical nature may operate as a very old-fashioned status leader in his home. The above discussion is in terms of role rather than of persons per se.

² For a more elaborate analysis than that which will be made here of the distinction between the innovator and the promoter, see F. Znaniecki, *The Social Role of the Man of Knowledge* (Columbia University Press, New York, 1940). For other aspects of creative leadership, see R. Fülöp-Miller, *Leaders, Dreamers, and Rebels* (Viking, New York, 1935); H. D. Lasswell, R. D. Casey, and B. J. Smith, *Propaganda and Promotional Activities* (University of Minnesota Press, Minneapolis, 1935); A. J. Murphy, "A Study of the Leadership Process" (*Amer. Sociol. Rev.*, vol. 6, pp. 674-687, 1941); and S. Winston, "Bio-social Characteristics of American Inventors" (*Amer. Sociol. Rev.*, vol. 2, pp. 837-849, 1937).

ical and social invention, like that of scientific discovery, is, however, so slow and arduous, so likely to be unfruitful, and even when it is fruitful, so unlikely to bring wealth or prestige to the innovator, that it must be assumed that most inventors, like most scientists, are men who innovate for the sake of innovation. Their dissatisfaction, in other words, is with things rather than with their own status, and their interest is in creation rather than personal profit. They are men with a cause—the mechanic who has skinned his knuckles so many times that he is dissatisfied with the conventional wrench and endeavors to improve upon it, the physician who becomes convinced that a standard surgical technique is far from the best possible and ventures to make some modification of it, or the honest legislator who from observation and experience comes to the view that a legal reform is needed and thereafter devotes himself to the framing of a new law.

In a society like our own, there are many fields of endeavor in which high rewards are given to those who make slight variations on standard themes—to the popular composer, the dress designer, the popular novelist, the commercial artist, the public lecturer, and the architect. These fields of endeavor are populated with personally ambitious individuals. Such persons do not, however, produce much that is significant for social change. For individual self-seeking does not in general lead to significant inventive endeavor, simply because the easy way to wealth, power, or prestige is almost always via conventional channels. Even in a highly dynamic society innovators are looked upon with suspicion, and the old and familiar is usually preferred to the new and untested. The current exceptions, and there are always some exceptions, are mainly in the realm of technology and the physical sciences. Even here the rewards for innovation come to those who do not venture too far from the established norms. The automotive engineer who designs “ahead of his times” will be laughed at rather than promoted; the physicist who advances a revolutionary theory may have to wait years before his colleagues catch up with him; and, of course, the politician who goes beyond what his constituents want, or think that they want, will most likely be out of office on the next election day.

Innovators are social leaders in the sense that they contribute to the evolution of new social forms. In respect to what they have innovated, they are in advance of those who in due time take over the innovation. But they are not always recognized as leaders; in most instances, as a matter of fact, an innovator is lost sight of long before what he has invented attracts attention and gains adoption. For every innovator who has been recognized as such—*e.g.*, the Wright brothers—there are unrecognized thousands who have contributed in large or small measure to the creation of every new complex technological device, area of human

knowledge, ideology, and form of social organization. Their personal satisfaction, if any, in the achievement must come from the doing, since there is little inclination on the part of society to reward them otherwise. Yet it is upon them, far more than upon the few who gain recognition as innovators, that the creative aspect of the process of social evolution depends.

Promotional Leadership.—Few important social innovations make their own way. Minor inventions may spread through a social population from individual to individual as fads or fashions. But any innovation whose adoption requires the abandonment of an old practice and some effort or economic cost must be sponsored by a recognized authority. People will not ordinarily break with an established idea, device, or practice unless they are assured that the break will be easy and without hazard and that the new is better than the old; and for such assurance they turn to recognized leaders. As a consequence, any significant innovation must secure the support of a leader before it has much chance of gaining adherents from the mass. A recognized leader may simply lend his name to the innovation, in which case his role is entirely passive.¹ When, however, a recognized leader propagandizes in behalf of the innovation or when a person who is not at the outset a recognized leader struggles, in behalf of the innovation, to become a leader, that individual is taking an active role. He is then a leader in fact rather than just in status.

Unlike the innovator, the promoter of an innovation is a manipulator of people. Whether he manipulates people for his own personal ends, as do salesmen and political demagogues, or for what he considers to be their own welfare, as do the sincere social reformers, he endeavors to change their conduct and is to that extent a factor in social change. His methods may be conversional, persuasive, dictatorial, legislative, or coercive, depending upon what leadership position he holds and what he is trying to get people to do.² The political candidate may use all these

¹ In the time of kings, royal sponsorship was necessary for the success of any important innovation, and the inventor or merchant who could gain the support of the king was almost certain of popular support. The king's status, rather than the king himself, then contributed to the diffusion of the innovation. Of late years advertisers have revived the authority appeal of status leaders, invoking the names of motion-picture stars and the like as sponsors for their products.

² For an analysis of these various techniques, see L. L. Bernard, *Social Control* (Macmillan, New York, 1939).

All those individuals who rise to positions of leadership through the use of these control techniques are in a loose sense self-made leaders. But not all who rise to positions of leadership are self-made. Some are simply thrown up by social events to a position of eminence. Controversy within a political party, for example, may lead to the nomination of a political nobody; the coming of war inevitably elevates many hack soldiers to positions of responsibility; and a banker's son may be made a corporation executive simply because he is the son of the banker. Although such men may appear to be self-made creative leaders, they are in fact event-made status leaders.

various leadership devices; he may promise the people boons they will have if he is elected, warn them of the losses they will suffer if he is not, buy votes where votes can be bought, persuade the ward leaders to work in his behalf, etc. Political leaders are, as a matter of fact, so often so much engrossed in getting and holding votes that they have little time or interest to devote to the promotion of legislative reforms. This characteristic of politicians in part accounts for the fact that social changes via law come so very slowly and so many attempts are ill considered.

Modern businessmen, on the other hand, are often able to promote innovations with great rapidity and success. The businessman is probably no less interested in personal gain than is the politician—indeed, he seldom even pretends to be concerned with human welfare. But ordinarily he promotes tangibles, such as new commodities; and his success does not depend upon the will of the majority; that is, he can start with one customer for his product and extend his market individual by individual, whereas the politician must gain the support of the majority of his constituents or he has in effect no support at all.

In the modern world most of the positions that are called “administrative” in business, government, education, religion, and other fields are promotional in character. The persons who hold these positions may not, of course, be real leaders at all. A businessman, bureaucrat, college president, or other administrator may be a reactionary who relies on the authority that accrues from his position to maintain the organizational *status quo*. He is but a figurehead, to whom irritated subordinates will refer as a “stuffed shirt.” But under competitive conditions an administrator, particularly in business, must direct the organization in a dynamic fashion if the organization is to survive in the long run. What usually happens is that an administrator manipulates people in behalf of programs originating elsewhere, perhaps with one or a number of his subordinates. Because he is by interest and temperament concerned with people and by occupation engaged in the manipulation of people, the ordinary administrator is not likely to be an “idea man.” Rarely in the annals of business has the man who led an enterprise to success also been the one who invented the product or sales procedure upon which the business was founded. Ordinarily there is in business as in other fields of life a functional division of labor between innovator and promoter.

Administrators of organizations are only one of the many kinds of people who in modern societies serve as promoters of one thing or another. Legislators have already been mentioned. Jurists, while functioning mainly as status leaders, do upon occasion change law by interpretation. All propagandists—journalists, advertising copy writers, public speakers, etc.—are, of course, endeavoring to effect changes in human behavior. In the contemporary world their number is legion, and they

have at their command all the new devices of communication. Whether a propagandist is as important a factor in social change as he presumes himself to be is open to question; but in the mass propagandists do aid in the diffusion of new, or revived, ideas and practices.

In the long run the survival of any innovation depends upon its functional value within the social context. Unless it in some way and to some degree corrects an existing disequilibrium, it will either fail to gain a significant number of adherents to make it a norm, or else it will eventually fall into disuse. The initial acceptance of an innovation, however, is almost wholly a matter of successful promotion. If an invention or discovery happens to secure the support of an energetic and ingenious promoter, it may be adopted for a while, however impractical it may prove to be in the course of time. On the other hand, the most useful innovation may easily go unrecognized if it does not happen to secure such sponsoring.

It is in part because inventors and discoverers are skilled in invention and discovery rather than in the manipulation of people that they so seldom gain personal recognition. And it is mainly because personal leadership is necessary for the adoption of new ideas, devices, or practices that promoters are often mistaken for inventors. Fulton, for example, did not invent the steamboat, as he is generally supposed by Americans to have done. He promoted it in America; he demonstrated the feasibility of the device and propagandized, against great odds, on its behalf. When the conditions of technology and trade made the steamboat commercially feasible, his labors came to fruit. (The English assign the origin of the steamboat to a different person, English, of course.) The men who actually contributed most to its invention are unknown.

Charismatic Leadership.—The promoter of a social idea or practice sometimes acquires a large and reverent following. The idea or practice is very often some sort of utopian plan which, falling upon fertile soil, becomes the center of a mass or revolutionary movement. As the plan gains adherents, it takes on mystic, religious significance; and the promoter becomes something of a messiah. His followers come to believe that he possesses specially conferred superhuman powers—charisms—and that he and what he represents therefore supersede all established precedents and practices. Such a leader becomes, in effect, a law unto himself.

Charismatic leaders are usually men of great and exceptional personal attraction. Ordinarily they believe in themselves (they are not to be confused with charlatans) and can inspire others with that belief. Freud, father of the cult of psychoanalysis, Hitler, symbol of the German Nazi movement, Lenin, promoter of the Russian Revolution, Joseph Smith, high priest of Mormonism, and Sun Yat-sen, hero of the still-to-be-

realized new China—these are but a few of the men who in recent years have risen to charismatic leadership.

The personal attributes of a charismatic leader do not, however, account in full for his rising to leadership and his gaining power over his following. Mass movements and revolutions are products of certain social circumstances and do not occur except under those circumstances. A charismatic leader cannot, of course, create the conditions that make for mass movements and revolutions. What he does is exploit those conditions, promoting a mass or revolutionary ideology, either of his own or someone else's invention. As the leader of a mass or revolutionary movement, he has considerable influence on the events of the day; but his actual contribution to social change is dependent upon the final outcome and repercussions of the mass movement or revolution.¹

THE COMMON MAN AND SOCIAL CHANGE

In most of the changes that occur within a society the mass of the people do not take a creative part. They are not, however, simply passive observers; they participate in the changes that take place. And in some phases of social life the common men as a mass not only participate but actually invent new patterns of behavior.

Mass Invention.—Some social practices and structures evolve out of the trial-and-error endeavors of so many individuals that they cannot be ascribed to any one innovator or promoter. Over the past two hundred years, for example, there has been evolving something new in the way of family organization. This evolution has on the one hand involved a multitude of individual solutions to predicaments that have arisen from the functional inadequacy of the old family system; such decisions, for example, as that of the son of a family to break his ties with home and strike out for himself, that of a newly married couple to establish their own household, that of parents not to add further to their family, etc. Out of a multitude of such individual decisions have come those measurable trends, the declining birth rate and the rising divorce rate, for example, that indicate changing norms in marital and parental relationships. The making of such trends in social organization is a process of mass invention about which little is at present definitely known.

Mass Selection and Rejection of Innovations.—Although the common man may in some few instances contribute creatively to social change, his major role in social change is that of selecting or rejecting the innovations made and promoted by others. Today, as in times past, adherence to established patterns and submission to established leaders are the normal

¹ See W. D. Wallis, *Messiahs: Their Role in Civilization* (American Council of Public Affairs, Washington, D. C., 1943).

lot of the common man. At the same time, the conditions of social disequilibrium that exist today and that give rise to innovators and aspirants to leadership also in some measure detach the common man from his regard for what is established. He fails to acquire normal respect for group precedents and established leaders; and, perhaps, adverse experience with what is normal for the group leads him to seek other precedents and other leadership. It is the composite decision or choice of many such men—those who have become marginal in regard to some aspect of their culture—that determines which of the many new products offered on the market will be successful, which if any of the would-be dictators becomes dictator, and so on.

By himself the common man is incapable of preventing the rise, say, of a political dictator; but if enough common men are unready for a change in political leadership, the would-be dictator will be a voice crying out in empty streets. If enough of a conquered population refuse to go over to the conqueror's side and to give sanction to the conqueror's use of coercive and economic controls over the population, the controls of the conqueror will in the long run be impotent; "black markets" and other evasive measures will tend to nullify the efforts of the conqueror to get the masses to accept his rule, and underground movements of one sort or another will go far to counteract the conqueror's threat of torture and death for disobedience. Conversely, if enough common men decide to adopt a new idea, device, or practice, nothing that established leadership does will prevent them from doing so eventually. Thus because millions of ordinary people found birth control techniques useful, having learned about them partly through the labors of promoters, they adopted them, in spite of the urgings, pleadings, and bribing of militaristic-minded governments, religious interests, and industrialists who cherish a large, hence cheap, supply of labor. Leaders may propose, but it is in the end the common men who determine the disposition of all innovations.

Fad, Craze, and Fashion.—The role of the common men in the making of social changes is most strikingly, if least significantly, manifest in fads, crazes, and fashions.¹ Under conditions of social equilibrium, the minor as well as the major modes of behavior are stable. Words and word usages change very slowly; the games that people play are traditional games; and their clothing styles and dress ornaments are conventionalized. In premodern China, for example, modes of dress were so stable that a bride could take to the home of her husband as part of her dowry all the

¹ For a more detailed, technical analysis of the process involved in the making of fads, crazes, and fashions and of the distinguishing characteristics of these forms of change, see Chap. IX in R. T. LaPiere, *Collective Behavior* (McGraw-Hill, New York, 1938).

clothing that she would need for the rest of her life. In such a society about the only things that changed with any rapidity were rumor stories regarding events of local interest; these grew and spread and soon died through the mechanism of gossiping.

In a dynamic, disorganized society, however, many minor aspects of social life change with much the same rapidity and in much the same sort of way as do the rumor stories of a stable society. As the rumor story, a dramatic interpretation of an event, spreads from person to person, slight new elements are added. For those who tell a rumor story do so in order to gain favorable attention from their fellows; and the better the story or the fresher the version of an old story, the more attention the teller will receive. Once the story has become standardized and generally known, it ceases to be attention getting; and those who seek attention through storytelling discard it in favor of a newer one.

In modern societies there is relatively little opportunity for the individual to gain attention by the telling of stories. The decline of institutional forms of organization, the diversification of group membership, and the high spatial mobility that are characteristic of modern societies mean that the individual lives much among disinterested strangers and little among intimate friends; and a rumor story that would be a good attention-getting device in a compact village or family group has little value under these conditions. Strangers and passing acquaintances are not interested in what happened to the bridge when the creek overflowed or what the neighbor's wife said to her husband. To secure attention in impersonal and transitory groupings, the attention-seeking individual may therefore resort to a quick and striking substitute for rumor—some action or affectation that is new and readily apparent and that makes the individual stand out for the moment from his associates.

The struggle of many attention-seeking individuals to stand out from the mass results in the invention of a multitude of deviations from the norms in minor aspects of society. Occasionally one of these inventions is adopted by a member of the group in which it first appears and is used by him as an attention-getting device in other groupings, where it may then be picked up and subsequently used by others in still other groupings. Like a rumor story, such an invention may as it spreads undergo a process of refinement, until at length, after transmission through thousands of individuals, it is a full-blown fad, craze, or fashion—a wisecrack, slang word, or dress fad, a game or other craze, or a new fashion in clothing, furniture, or house decoration.

Fads, crazes, and fashions are unpredictable and have little discernible relationship to other aspects of social life. They may be described as mass whimsy, fugitive and transitory deviations that have little effect on the major trends of social change. The trend in women's clothing, for exam-

ple, has for the past fifty years been toward less and less, a trend that reflects a change that has slowly been taking place in the social status of women, in sex mores, and in aesthetic values. Woven in and about this trend have been innumerable fads and fashions, which have appeared and disappeared without influencing the general trend.

Survivals.—Few fads, crazes, or fashions leave any imprint on the culture. They are symptomatic of social disequilibrium but are not contributions to social evolution. Their value is extrinsic and arises from their giving the user some favorable attention because they are new and arresting. Once, therefore, such a device or mode of action loses its newness, it loses its value and is dropped. Occasionally, however, an object or mode of action that has some intrinsic value will develop as a fad, craze, or fashion; and the object or mode of action may then survive on its own merits after it has been spread widely and has lost its attention-getting value. A considerable number of devices that are now established elements of contemporary American society came into popularity as fads—for example, the mechanical cigarette lighter, a fad of the early 1920's; the radio, a fad of the same period (it then had little else to commend it); and the zipper, which had been in very limited use until it became a fad object early in the 1930's. Many of the words and remarks that are now in good usage were initially fads; and many such established games as golf came into our culture, or at least spread through the society, as crazes.

THE MASS MOVEMENT¹

From time to time in a dynamic, disorganized society there arises and spreads a craze-like mode of behavior of an encompassing, violent, and significant character. This sort of deviation is distinguished from minor cultural deviations by the term "mass movement." A mass movement may involve spatial movement, as did the medieval Crusades, the California gold rush, and the Florida land boom of the 1920's. By "movement" is meant, however, a rapid shift away from the norms of group behavior. A more descriptive term would be "collective aberration," for the movement away from the norm is the group parallel to the psychopathic devices by which an individual may escape from realities that have become intolerable. The term "mass movement" has, however, become established in the literature of sociology.²

¹ For a variety of descriptive materials, see H. Cantril, *The Psychology of Social Movements* (Wiley, New York, 1941). See also B. Barber, "Acculturation and Messianic Movements" (*Amer. Sociol. Rev.*, vol. 6, pp. 663-669, 1941); J. B. Holt, "Holiness Religion: Cultural Shock and Social Reorganization" (*Amer. Sociol. Rev.*, vol. 5, pp. 740-747, 1940); H. W. Laidler, *Socio-economic Movements* (Crowell, New York, 1944); and W. W. Sweet, *Revivalism in America: Its Origin, Growth, and Decline* (Scribner, New York, 1944).

² The field of sociopsychological study within which the phenomenon of mass movements falls is usually designated "collective behavior." See H. Blumer, "Col-

Crisis and Social Tensions.—The various ways in which the discontented, poorly socialized members of a dynamic society may resolve their dissatisfactions were mentioned earlier. Some few individuals, it will be recalled, develop sufficient initiative to modify their social roles, either through invention or the promotion of an invention, to conform to what they consider their roles should be and thereby contribute in some small measure to the evolutionary changes occurring within their society. Most maltrained individuals, however, must submit to the roles imposed upon them by society, either because they lack the initiative necessary to bring about a change or because of social resistance to their efforts to work changes in their roles. Such individuals then either reconcile themselves to the distasteful aspects of their society or else hit upon a mental escape from them, becoming neurotic or psychotic. Individual flights from reality are thought to be resolutions of tensions produced by opposition between self and society. Thus the individual who is frustrated by circumstances from satisfying an ambition, who is deprived by changing circumstances of an accustomed status, or who is forced by circumstances to violate his ideals may build up tensions over time, which, when they become sufficiently disturbing, erupt in some deviant action—the individual may imagine the money he does not have, he may murder his nagging wife, or he may “forget” the shady business deal that he can no longer permit himself to remember.

A changing society constantly produces tensions of considerable magnitude in some of its members and of lesser magnitude in many of them, for the piecemeal and gradual changes by which a changing society moves toward functional equilibrium necessarily lag behind the need for change. Ordinarily, individuals resolve their tensions in individual ways or periodically discharge them through such group activities as bull-fights, fiestas, football games, and other forms of revelry. Any marked crisis in the society, however, may so intensify these tensions that they cannot be, or at least they are not, either resolved individually or dispelled in group revelry. The social population, or some particular class of it, then becomes supercharged and, like an overwrought individual, capable of making a collective flight from reality—of undertaking a mass movement.¹

The Fanatical Ideology.—The core around which every mass movement grows is a fanatical ideology, new or revived. The beliefs that are basic to it are foreign to the culture and thus violate social realities; they

lective Behavior” in *An Outline of the Principles of Sociology* (R. E. Park, ed., Barnes & Noble, New York, 1939); and R. T. LaPiere, *op. cit.*

¹ See G. W. Allport, J. S. Bruner, and E. M. Jandorf, “Personality under Social Catastrophe: Ninety Life-histories of the Nazi Revolution” (*Charact. & Pers.*, vol. 10, pp. 1-22, 1941).

constitute a redefinition of some aspect of the world and how it operates. Upon these beliefs is erected an easy and certain cure for the troubles that beset man, whether they be economic, political, "spiritual," or what-not. Fanatical ideologies are utopian in that they propose a sweeping improvement in the society. But unlike most utopian ideologies, fanatical ideologies do not start with things as they are and build a plan from them; they start, rather, with things as they are not.

The origin of a fanatical ideology cannot ordinarily be traced to any one person. And even when it is based upon one person's ideas, it changes in spreading in much the same way as does a rumor or a fad. The spread of the fanatical ideology is, however, more or less limited to those persons in the population who are acutely distressed by social circumstances. A fanatical ideology may be taken up by depressed tenant farmers in a given locality but not by the more prosperous farm owners and town and city people. Likewise, a fanatical ideology may be adopted by the more disgruntled of the underpaid or unemployed workers in a city but not by all of them. The appeal of a fanatical ideology is, thus, rather specific. Most of those who were inspired to give up their savings and enter a "heaven" by Father Divine's theory of how to grow rich and happy were Harlem Negroes of the laboring class; most of those who joined in the trek to Florida in 1925 were white tenant farmers from Arkansas and adjacent states; most of those who in 1936 sought in California the land of plenty were "dust bowlers" from the drought-depressed regions of Oklahoma and Arkansas.

Unlike most ideologies, those of the fanatical type serve to direct the behavior of people into new channels. Those who adopt the fanatical ideology proceed to act upon it. If according to the ideology there is a land of milk and honey just across the hills, they pack up and to the best of their abilities start off across the hills. If, as is the substance of many fanatical ideologies, vigorous prayer and a contribution to the prophet are the magic way to health, wealth, and happiness, they pray and make their contribution and then go home to await the coming of the promised benefits.

When the movement has a leader, the fanatical ideology frequently gives him the distinction of being a messiah who has come, in the Biblical manner, to lead his followers out of chaos into an earthly paradise. In the eyes of his followers the leader thus possesses the charismatic qualities mentioned earlier. Many such "messiahs" are faith healers who claim or are reputed to possess power to heal all human ills, perhaps by a laying on of hands. Others are religious revivalists who are supposed to have found the true way to God's good graces and to possess a specially favored position in God's eyes. (All successful evangelists are in a limited way leaders of mass movements.) Some of these revivalists build upon

their religious base a utopian plan for the good and godly society, and they and their ideologies serve as the center around which new religious cults are developed. Mormonism, Christian Science, Jehovah's Witnesses, and many other religio-social groups originated in such a fashion.¹

A messiah is not, however, essential to a mass movement. Often the magic powers that are to improve man's lot lie not in some individual but rather in some kind of object or mode of behavior. When an object—gold, land, stocks, or almost anything else that has or might have economic value—becomes the magic means to wealth, the result is a boom. Possession of this object is believed automatically and immediately to assure the owner total and enduring freedom from economic care. The boom action consists of endeavoring to obtain this new-day Golden Fleece, either by going where it is, as in the case of a gold rush, or by purchasing it. Over the years the oddest sorts of things have been made boom objects; tulip bulbs became boom objects in Holland early in the seventeenth century, stock in the first ill-fated Panama Canal project was at one time bid up to astronomical values in France and elsewhere, southern California lands were the object of a spectacular boom in the 1880's, and Florida swamplands were bought and sold at prices higher than the cost of Manhattan property in the early 1920's. During the latter part of that decade the get-rich-quick-without-work-or-risk ideology became prevalent throughout the United States; and competitive bidding for industrial stocks inflated their market value to such an extent that the reaction, when it came in 1929, constituted a major and world-wide economic disaster.

When the fanatical ideology centers, as it often does, upon the erection of a new and unprecedented kind of society, in which all the members will enjoy perfect health, wealth, and happiness, the mass movement may be either an actual movement of persons to a promised land where the new society can be established, or else agitation for the enactment of some political cure-all. A century or two ago, those who were acutely dissatisfied with the *status quo* were usually inclined to attempt to establish in some unsettled land a colony organized into a commune, in which, according to the fanatical ideology, the members would live together as brothers. Today agitation for a political cure-all is more common than is actual movement of persons, perhaps because the continual expansion of state functions has encouraged the belief that their indefinite expansion is all that is necessary to bring the ideal society into being. The favorite panacea for present-day social ills is at any event a novel form of legislation, such as the Townsend old age plan that had so many fanatical adherents in America during the early 1930's. Occasionally a mass movement

¹ See, for example, H. Hewitt, *The Jehovah's Witnesses* (Columbia University Press, New York, 1945).

consists, as did the Ku Klux Klan movement following the First World War and certain aspects of the Nazi movement in prewar Germany, of the formation of organizations dedicated to the subordination or extermination of a minority group that is supposed to be the cause of all social ills. Such a mass movement has some of the characteristics of a revolutionary movement.

The Mass Movement and Social Change.—The mass movement gives hope to those whose despair has led them to accept the fanatical ideology, detaches them from their normal modes of life, and leads them into new activities, which may indirectly disturb other people. The gold rush to California, for example, disturbed, if it did not uproot, the regular residents of California. All mass movements are, however, transitory. The messiah dies, or his following withers away; the boom collapses; the promised land does not live up to its promise; the utopian colony reverts to unutopian practices or else breaks up through internal dissension; and the political cure-all fails to cure. With the end of the movement the participants, provided that they have survived, return from the land of fantasy to a reality that is even worse than the one that they left. While they were endeavoring to gain health, wealth, and happiness by magic methods, their illnesses progressed, their fields reverted to weeds, or they lost their jobs and whatever other small claims to happiness and security they once possessed.

A mass movement is thus a sort of social storm that blows up, excites activity, and upon passing leaves little but wreckage behind. Although it dissipates the accumulated tensions upon which it grew, it does not reduce the social disequilibriums that produced those tensions; and it usually intensifies them. Indirectly and in the long run, however, some mass movements contribute to evolutionary changes. They do not influence the direction of the changes; for as experiments in social change, mass movements are always failures. But they may increase the rate of change.

The Precipitation of Crisis.—One way that a mass movement may increase the rate of social change is by intensifying the social maladjustments that produced the movement to such an extent that a crisis in this particular phase of society is precipitated. Social maladjustments, like body ills, may become chronic and may come to be taken for granted by everyone else. When those who suffer from long-standing maladjustments draw attention to themselves by becoming embroiled in a mass movement, they may frighten political and other leaders into action; and they will undoubtedly intensify, and hence make critical, their own social predicament. In some few instances one or another or a combination of these indirect consequences of a mass movement stimulates inventive and promotional effort to correct the actual conditions that underlay the movement itself.

The Townsend old age pension plan, for example, precipitated a political crisis in regard to the chronic and increasing economic plight of the aged in America.¹ The Townsend plan was a fantastic proposal for the nation to lift itself out of the economic doldrums of the early 1930's by paying a large monthly pension to every American over a certain age. It appealed to impoverished elders and served as the ideology for a widespread mass movement. Nothing came of the plan itself, although many elders spent what little money they had in furthering the program. But the movement did attract public attention to the fact that the proportion of elders in the American population had been gradually increasing and that many were without economic security of any sort. Provision of some sort of security for the aged was widely discussed; many alternatives to the Townsend plan were proposed; and general interest in the subject led—or frightened—Congress into enacting social security legislation. That legislation was long overdue. England and a number of the countries on the Continent had instituted social security legislation decades earlier.

Acceleration of Current Changes.—The other way that a mass movement may increase the rate of social change is by accelerating changes that are already in process. Here the fanatical ideology provides a new and fantastic reason for doing what is already being done more slowly and for more realistic reasons. Mormonism, the California gold rush, and the subsequent California land boom undoubtedly hastened the settlement of the western part of the American continent.² That settlement was in process without benefit of a fanatical ideology, but the mass movements that centered on the West encouraged many who would not otherwise have done so to endure great hardships and migrate westward under the illusion that they were going to build a utopia or win great wealth. The Salt Lake region would no doubt have in due time become populated without the aid of Joseph Smith and the Mormon movement that he led, and California would no doubt have become a land of farms and cities without gold and the gold rush that followed its discovery. But without these movements, the development of these regions would have been much slower than it actually was.

The mass-movement aspects of German National Socialism in prewar Germany likewise served to speed changes that were already in process. Immediately after the armistice of 1917 the German General Staff began its preparations for another war of conquest. It used the "token" army

¹ For an analysis of this movement and its immediate consequences, see H. Cantril, *op. cit.*

² The same thing was true of the Alaska gold rush and of the many other gold rushes that have occurred during the past two centuries. See W. P. Morrell, *The Gold Rushes* (Macmillan, New York, 1941).

that was permitted by the Treaty of Versailles as an agency for the training of a new German army, it worked on the improvement of military tools, and it conducted experiments in tactics. In doing these things, the German General Staff no doubt had the passive support of the German people. But not until the rise of the Nazi party, of which Hitler was the messiah, did the German General Staff secure much active support from the mass of the people. Under Hitler, the German people were incited to heroic effort, with the consequence that their next attempt at world conquest came considerably sooner than it otherwise could have.

REVOLUTION¹

An individual who is worried or discouraged beyond endurance may take a flight into fancy, but one who is exasperated beyond the point where he can restrain himself is more likely to strike out against the thing or person who is or seems to be the cause of his difficulties. The collective parallel to individual assault upon persons or things is rebellious behavior, and it is out of such collective violence that revolutions are fashioned. Like mass movements, revolutions express pent-up social tensions; but revolutionary action, rather than being a flight from reality, is an attack upon some aspect of it.²

As an Attack upon the Status Quo.—Every revolution (and every riot, whether or not it contributes to the making of a revolution) is a collective revolt against the *status quo*. Usually the revolt involves violence; and it always violates social values in that it attacks persons or things that have previously been held more or less sacred. Revolution is, therefore, movement against rather than movement away from the *status quo*.

Some revolutions have been the culminations of long-standing regional conflicts and have taken the form of attack by one section of a political unit against another. Such was the nature of the American Revolution, in which the American colonies broke off from the mother country, and of the American Civil War. In the latter revolution the Federal government, dominated by the antislavery Northern states, was endeavoring to bring about changes in the social structure of the Southern states. The upshot was warfare between one section of a political unit that

¹ See C. Brinton, *The Anatomy of Revolution* (Norton, New York, 1938); L. P. Edwards, *The Natural History of Revolution* (University of Chicago Press, Chicago, 1927); R. B. Merriman, *Six Contemporaneous Revolutions* (Clarendon Press, New York, 1938); and P. A. Sorokin, *The Sociology of Revolution* (Lippincott, Philadelphia, 1925).

² For a case-history study of this process, see H. Orlansky, *The Harlem Riot: A Study in Mass Frustration* (Social Analysis, New York, 1943). See also L. Gottschalk, "Causes of Revolution" (*Amer. J. Sociol.*, vol. 50, pp. 1-8, 1944); P. Meadows, "Sequence in Revolution" (*Amer. Sociol. Rev.*, vol. 6, pp. 702-709, 1941); and H. G. Stetler, *The Socialist Movement in Reading, Pennsylvania: A Study in Social Change* (University of Connecticut Press, Storrs, 1943).

wanted to foster changes and one that wanted to maintain the *status quo*. The squabble over "states' rights" obscured the real issue. But from a sociological point of view, it was the North that rebelled against the South, rather than the other way around; for the Southern states had the weight of precedent, legal and otherwise, on their side.

All revolutions are conflicts between a group that represents the *status quo* and one that represents some form of social change. Most revolutions, however, involve class groups rather than sectional groups. Such revolutions may be thought of as crises in the class conflict that is characteristic of all modern and apparently of all disorganized societies. The conditions that make for class conflict were discussed in a previous chapter.

Status Leaders and Revolution.—Conflict between classes may be gradually and rather peacefully resolved by evolutionary changes within the class system. When, however, the technological or other changes that make for malfunctioning of the established class system come rapidly, as was the case during the early industrial revolution, a wide gap may develop between what exists and what would be functionally effective. This gap may be reflected either in the impoverishment of one class, as was the case with the English laboring class during the early phases of the industrial revolution and more recently with the working classes of Czarist Russia, or else in the inability of a class to satisfy its expanding wants, as was the case with the rising middle class that revolted against the aristocracy of preindustrial France.

In either event, the dissatisfied class invariably places the blame for the unsatisfactory state of affairs upon the established leaders. These leaders, political, religious, and economic, represent the class *status quo* and defend it to the best of their ability. If their position is strong, they can impede evolutionary changes, discouraging innovations and preventing the promotion of "radical" ideas, often by imprisoning or executing those who venture to suggest that anything is wrong with things as they are. By such means they may long succeed in maintaining a condition of static disequilibrium. Thus the aristocracy, the Russian Church hierarchy, and the intellectuals of prerevolutionary Russia succeeded in delaying the industrialization of Russia for perhaps a good fifty years, even as comparable groups of status leaders have delayed the evolution of modern technology and modern social systems in Spain, the Latin American countries, and elsewhere. Such retarding of social change may seem to prevent class conflict, but it actually makes for an intensification of covert conflict between the elite and one or another of the socially inferior classes. For the latter, this covert conflict means an accumulation of social tensions. The members of the class become increasingly dissatisfied with things as they are and progress from a state of unexpressed discontent to one of sullen anger toward the elite. Anger may be ex-

pressed in a variety of trivial ways—in disrespectful actions toward the elite or its minions, the police, in sporadic and random acts of mob violence, and the like.

Ordinarily outright rebellion does not occur until and unless the established social leaders make some specific move that can be regarded by the disgruntled class as the "cause" for grievance. This act, the provocation, may be an unusually harsh political decree, new repressive economic measures, or exceptionally brutal treatment of members of the subordinated class by the police or armed forces. Some such provocation seems to be necessary to unify the disgruntled and to crack the cultural inhibitions that prevent violent expression of their feelings. The responsibility for the outbreak of rebellious behavior rests, therefore, insofar as it can be allocated to any person or class of persons, upon the status leaders of the society.

Revolutionary Ideology and Leadership.—Rebellious outbursts do not, however, constitute a revolution. Unless such outbursts are coordinated and directed toward the making of a new social system, a rebellious group expends its energy and fury in random and ineffectual destruction. The mobs of late eighteenth-century Paris destroyed persons and property for weeks before their violence was given revolutionary unity and purpose; likewise there was a long period of sporadic rioting by soldiers, sailors, and urban workers before the Russian Revolution of 1917 began to take shape and form. Social disequilibriums and the resistance of status leaders to evolutionary changes make for rebellion, but it is revolutionary ideology and leadership that fashion a revolution out of rebelliousness.

Revolutionary ideologies differ considerably in detail. The ideology of the French Revolution, Jacobinism, was middle class in orientation and, like that of the American Revolution, was directed against a hereditary aristocracy and an authoritarian system of government. Marxism, the ideology of the Russian Revolution, on the other hand, was concerned with the economic liberation of the depressed industrial workers and was directed against capitalists and the laissez-faire system of economic life.¹ Communistic ideology, a derivation of Marxism, is in some of its versions an internationalistic dogma that is more concerned with "world revolution" than with any local class structure. Many revolutionary ideologies are agrarian and are concerned with the liberation of a peasant class, with land reforms, and with the liquidation of a hereditary landlord class. Presumably the differences in revolutionary ideologies reflect the differences in the conditions that gave rise to them and that they propose to correct.

¹ Compare C. Brinton, "Jacobinism" (*Encycl. Soc. Sci.*, vol. 8, pp. 360-363); and M. Beer, "Communism" (*Encycl. Soc. Sci.*, vol. 4, pp. 81-86).

Although revolutionary ideologies evolve under conditions of social repression, they have seldom been the product of the class that is most adversely affected by those conditions. Marx, for example, was not a member of the "enslaved" proletariat for whom he pleaded; nor was Sun Yat-sen, ideological father of the Chinese Revolution, a member of the depressed peasantry. The ideologists of the French and American Revolutions were scholars, philosophers, and men of letters; although they did not belong to the elite, they certainly were not members of the repressed merchant and craftsman class. They, like most revolutionary ideologists, were intellectuals with a somewhat detached social status who were, for intellectual rather than economic reasons, concerned with the welfare of the repressed class.¹

Every revolutionary ideology is the product of many men, the final outcome of long and often bitter polemics, during which the only test of truth is dialectic. It is an untested plan for social change, a sort of road map into the social future in which there are as yet no roads. The heart of the ideology is the belief that desirable social changes can be brought about only through a sharp break with the past and its representatives, the established leaders. Until these leaders are deposed by a more or less violent uprising on the part of the exploited mass (the middle class, the peasantry, or the proletariat), no desirable changes can or will occur in the social system. Once the elite have been deposed, the reforms incorporated in the ideology can then be effected; and men will thereafter live in peace and plenty. A revolutionary ideology is thus both a utopian plan for the future and a program of violence by which that plan can be put into effect.

The intellectuals who have contributed to the development of a revolutionary ideology have seldom attempted to aid in bringing the revolution about. Here as elsewhere there has usually been a distinction between innovator and promoter; and the promoters of a revolution, unlike the inventors of the ideology, have generally been members of the class that is most hampered by the existing class system. Although Marx and Engels, for example, wrote the Communist Manifesto, they did not go among the people to propagandize for the doctrine. The spread of Marxian ideology was undertaken by resentful peasants and industrial workers, with a sprinkling of intellectuals, such as Lenin.²

¹ The fact that most revolutionary and other utopian ideologies originate among the intellectual class has been incorporated by K. Mannheim into a special doctrine of social change. He argues, as Comte did before him, that the future of society rests upon the maintenance of a free and respected intellectual class and that only such a class can have the detachment necessary for making workable inventions in social organization. See K. Mannheim, *Ideology and Utopia* (translated by L. Wirth and E. Shils, Harcourt, New York, 1936).

² See R. P. Dutt, *The Life and Teachings of V. I. Lenin* (Dutton, New York, 1934).

The Revolutionary Party.—Every revolution that has been in any degree successful has had trained and organized leadership as well as wide support. Revolutionary mobs cannot depose the leaders of the *status quo*, although they have often attempted to do so. However corrupt and debased they may be, the leaders of the *status quo* are always trained and organized, and they have control of all the established agencies—the police, the army, etc. Preliminary to every successful revolt, therefore, has been a long period of agitation for revolt and of organization for revolt, both of which have usually been conducted under cover and against great odds. Skillful and courageous leadership is necessary for the spreading of the revolutionary ideology and for the building of an organization that will be capable of giving revolutionary coordination and direction to revolt when revolt does finally come. Revolutionary leaders have, therefore, been persons with great drive and with zealous faith in the revolutionary cause. Without leaders of this sort to form a revolutionary party and to prepare it to take over when rebellion breaks out, no revolution is possible. These leaders do not, of course, in any sense cause the rebellion. The rebellion is, as has been indicated, a more or less spontaneous outbreak that expresses long-standing discontent and that is provoked by some excess on the part of status leaders.

Revolutionary Reforms.—Many revolutions, including the French, American, and Russian Revolutions, have been successful up to the point where, having deposed the status leaders, the leaders of the revolutionary party have taken over command of the political and, in some instances, economic systems. By that time the destruction of physical properties and the strains that revolt imposes upon the society are so great that a more or less complete collapse of economic, political, and social life occurs. Revolutionary leaders thus acquire not a going society but a chaotic one. And it is at this point that long-range utopian planning invariably gives way to such immediate and practical considerations as that of restoring order and providing food for the hungry.

In no two instances have the developments in the period immediately following revolutionary deposition of established leaders been the same. About all that can be said of the postrevolutionary period is that it does not run true to the revolutionary plan. In some instances, revolutionary leaders, having secured their power, have become staunchly conservative and have directed their efforts to rehabilitating the old system or establishing some moderate variation of it. Such was the case with the Italian Fascists under Mussolini, who came in as a revolutionary leader and went out as a reactionary. In other instances, most notably perhaps that of postrevolutionary Russia, the revolutionary leaders have adhered for some time to the revolutionary ideology and have bent their efforts to building the utopian society with ruthless and efficient dis-

regard for such pressing but transitory matters as the hunger of the people. The leaders of the American and French Revolutions attempted to do likewise; but, although their ideological programs were less sweeping than was that of the Russian Bolsheviks, their efforts promptly failed.

The reforms that are undertaken by postrevolutionary leadership tend to be tempered by the disillusionment of the masses. In order to gain acceptance as leaders against the weight of long tradition, revolutionaries invariably oversell their programs; and the masses follow them in the anticipation that, the moment the fighting is over, peace and contentment will reign. During the postrevolutionary period the masses are therefore inclined to measure their condition not against their pre-revolutionary predicament but against their expectations of what the revolution would bring. No matter how much better it may be, the condition of the masses will inevitably be less utopian than the masses were led to expect. The primary problem of the new leaders is, therefore, to retain and consolidate their position of leadership; for a disgruntled people who have at length come to rebel against long-established leaders will have little compunction about rebelling against the new elite. Attempts of revolutionary leaders to consolidate their position have usually taken the form of strong repressive measures, the offering of concessions for the support of vested interest groups, and the like. When, as was the case in early postrevolutionary America, such devices have not been resorted to, utter chaos has resulted.

Counterrevolution.—The inability of revolutionary leaders to produce forthwith the promised utopia and in some instances their excessive zeal in trying to hammer through ideological reforms have often resulted in their losing the support of the people, thereby paving the way for the rise of counterrevolutionary movements. Usually led by the more energetic and ingenious of the old status leaders, a counterrevolution draws its support from those who have become disgusted and disillusioned with the revolution itself. In some instances a counterrevolution has followed quickly on the heels of a revolution; and when the cycle has been completed, nothing much has been changed. The rise of the Falange party of Franco and its successful domination, with the military help of Germany and Italy, of Spain was a counterrevolution of this sort. (The original revolution had been accomplished largely by peaceful—i.e., political—means.) Counterrevolutions have sometimes accomplished conservative changes in the conditions that have led to revolution; they have been a sort of catching up with the present after a revolutionary jump into the future. The elevation in postrevolutionary France of Napoleon to the position of First Consul and ultimately to that of Emperor was, for example, a moderately conservative counterrevolution.

Not all counterrevolutions have involved the displacement of the revo-

lutionary leaders by former status leaders. In some instances the unworkability of the revolutionary program has led to a revision of the revolutionary ideology; and the revolutionary leaders, or their lineal successors, have revised the program in the light of experience. Such revision is necessarily toward, rather than further away from, cultural precedents; thus it constitutes a counterrevolution in the eyes of those who hold for a strict interpretation of the original dogma. The ideologists of the American Revolution, for example, generally advocated political independence for each of the freed colonies; and when the break with British monarchy was complete, that program was attempted. But political independence was not in accord with economic interdependence, and conditions in the colonies grew rapidly worse rather than better. The counterrevolution consisted of agitation for and eventual achievement of a federation, under which certain of the rights of a colony were subordinated to the interests of all. In the eyes of many liberal thinkers of the times, the Constitution of the United States was a reactionary document that threatened to destroy the freedom of the individual for which the revolution had been fought.¹

Similarly, during the first few years following their ascension to power, the leaders of Soviet Russia adhered strictly to Marxian doctrine as interpreted by Lenin. They succeeded neither in bringing about the world revolution nor in establishing the equalitarian society in Russia, both of which were required by the Marxian doctrine. The elevation within the party of Stalin as Lenin's successor seems to have reflected a counterrevolution that was already under way. At any event, under Stalin communism has become more Russian than Marxian and more capitalistic than communalistic; organized religion has come to be officially sanctioned, the family has become reestablished, private property rights have been revived, differentials in income have become wider than they are in any so-called "capitalistic society," and Russian foreign policy is almost indistinguishable from that followed in the time of the Czars.² The Russians have not gone back to the social system that was operative in the days of the Czars, any more than the people of America upon the

¹ But to those who believed in government of, by, and for a hereditary aristocracy the Constitution was a very radical plan for political organization. On this point, see A. C. Millspaugh, *Democracy, Efficiency, Stability* (Brookings, Washington, D. C., 1942).

² See N. S. Timasheff, *The Great Retreat: The Growth and Decline of Communism in Russia* (Dutton, New York, 1946). See also A. Bergson, *The Structure of Soviet Wages* (Harvard University Press, Cambridge, 1944); M. Fairchild, "Socio-economic Classes in Soviet Russia" (*Amer. Sociol. Rev.*, vol. 9, pp. 236-241, 1944); J. H. Hazard, "Law, the Individual and Property in the U.S.S.R." (*Amer. Sociol. Rev.*, vol. 9, pp. 250-256, 1944); R. Maurer, "Recent Trends in the Soviet Family" (*Amer. Sociol. Rev.*, vol. 9, pp. 242-249, 1944); and N. S. Timasheff, "Vertical Mobility in Communist Society" (*Amer. J. Sociol.*, vol. 50, pp. 9-21, 1944).

founding of the federation went back to the political system of prerevolutionary days. But they have, as all societies must during a postrevolutionary period, revived much that was old; and they have achieved relatively little that is actually revolutionary in the way of social organization.

Revolution and Social Change.—Judged in terms of the revolutionary program, every revolution has been a failure. There never has been a planned reorganization of society that has been carried through according to schedule. The reason lies in the fact that not enough is yet known about the nature of society to permit the designing in anticipation of a social system that will actually work. Until there is a fully developed science of society, all social changes must be worked out on an empirical basis, by laborious and costly trial and error.

Viewed as an experiment in social change or as a complex of related experiments—a view that revolutionaries never accept—a revolution may, however, be relatively successful. As has been indicated, revolution is the outcome of the repression of evolutionary change; and it may open the way for such change. Revolution does not, of course, accomplish that change; it cannot take the place of the evolutionary process. But revolution is apparently the only way by which a society that has arrived at a state of static disequilibrium can be brought to one of dynamic disequilibrium and thence begin the slow, laborious evolution of functionally effective social forms.

SUPPLEMENTARY BIBLIOGRAPHIES

1. (Cited on p. 25.)

- BENEDICT, R.: *Patterns of Culture*, Houghton Mifflin, Boston, 1934.
 FEI, H. T., and C. I. CHANG: *Earthbound China*, University of Chicago Press, Chicago, 1945.
 FORD, C. S.: *Smoke from Their Fires*, Yale University Press, New Haven, 1941.
 KEESING, F. M.: *Native Peoples of the Pacific World*, Macmillan, New York, 1945.
 LEYBURN, J. G.: *The Haitian People*, Yale University Press, New Haven, 1941.
 MACGREGOR, G.: *Warriors without Weapons*, University of Chicago Press, Chicago, 1946.
 MEAD, M.: *Cooperation and Competition among Primitive Peoples*, McGraw-Hill, New York, 1937.
 PARSONS, E. C.: *Peguche*, University of Chicago Press, Chicago, 1945.
 RADIN, P.: *Indians of South America*, Doubleday, New York, 1942.
 REDFIELD, R.: *The Folk Culture of Yucatan*, University of Chicago Press, Chicago, 1941.
 SMITH, T. L.: *Brazil: People and Institutions*, Louisiana State University Press, Baton Rouge, 1945.
 THOMAS, W. I.: *Primitive Behavior*, McGraw-Hill, New York, 1938.
 THOMPSON, L., and A. JOSEPH: *The Hopi Way*, University of Chicago Press, Chicago, 1945.
 USEEM, J.: "The Changing Structure of a Micronesian Society," *Amer. Anthropol.*, vol. 47, pp. 567-587, 1945.
 VAILLANT, G. C.: *Aztecs of Mexico*, Doubleday, New York, 1941.
 YANG, M. C.: *A Chinese Village*, Columbia University Press, New York, 1945.

2. (Cited on p. 37.)

- ALEXANDER, C.: "Is Sociology an Exact Science?," *Amer. Sociol. Rev.*, vol. 11, pp. 1-6, 1946.
 BARNES, H. E., H. BECKER, and F. B. BECKER: *Contemporary Social Theory*, Appleton-Century, New York, 1940.
 BECKER, H.: "Constructive Typology in the Social Sciences," *Amer. Sociol. Rev.*, vol. 5, pp. 40-55, 1940.
 BERNARD, J.: "Normative Collective Behavior: A Classification of Societal Norms," *Amer. J. Sociol.*, vol. 47, pp. 24-38, 1941.
 COTTRELL, L. S., JR.: "The Analysis of Situational Fields in Social Psychology," *Amer. Sociol. Rev.*, vol. 7, pp. 370-382, 1942.
 CUBER, J. F.: "Are there 'Principles' of Sociology?," *Amer. Sociol. Rev.*, vol. 6, pp. 370-372, 1941.
 DODD, S. C.: *Dimensions of Society: A Quantitative Systematics for the Social Sciences*, Macmillan, New York, 1942.
 FORSYTH, F. H.: "Relevance and the Academic Bias," *Amer. Sociol. Rev.*, vol. 11, pp. 26-31, 1946.
 GREENWOOD, E.: *Experimental Sociology: A Study in Method*, Columbia University Press, New York, 1944.
 GURVITCH, G., and W. E. MOORE, eds.: *Twentieth Century Sociology*, Philosophical Library, New York, 1944.

- JAMESON, S. H.: "Principles of Social Interaction," *Amer. Sociol. Rev.*, vol. 10, pp. 6-12, 1945.
- LUNDBERG, G. A.: *Social Research: A Study in Methods of Gathering Data*, Longmans, New York, 1942.
- LUNDBERG, G. A.: "The Proximate Future of American Sociology: The Growth of Scientific Method," *Amer. J. Sociol.*, vol. 50, pp. 502-513, 1945.
- LUNDBERG, G. A.: "The Social Sciences in the Post-war Era," *Sociometry*, vol. 8, pp. 137-149, 1945.
- MEADOWS, P.: "Discussion on the Dialectic of the Situation," *Phil. Phenomenol. Res.*, vol. 5, pp. 354-364, 1945.
- MERTON, R. K.: "Sociological Theory," *Amer. J. Sociol.*, vol. 50, pp. 462-473, 1945.
- PARSONS, T.: *Structure of Social Action*, McGraw-Hill, New York, 1937.
- WOOD, A. L.: "The Structure of Social Planning," *Social Forces*, vol. 22, pp. 388-398, 1944.

3. (Cited on p. 62.)

- ALLPORT, G. W.: *Personality: A Psychological Interpretation*, Holt, New York, 1937.
- BARNETT, H. G.: "Personal Conflicts and Cultural Change," *Social Forces*, vol. 20, pp. 160-171, 1941.
- BONNEY, M. E.: "Parents as the Makers of Social Deviates," *Social Forces*, vol. 20, pp. 77-87, 1941.
- BOWMAN, C. C.: "American Culture and the Problem of Personal Organization," *Social Forces*, vol. 19, pp. 482-491, 1941.
- COTTRELL, L. S., JR.: "The Adjustment of the Individual to His Age and Sex Roles," *Amer. Sociol. Rev.*, vol. 7, pp. 617-620, 1942.
- DAI, B.: "Personality Problems in Chinese Culture," *Amer. Sociol. Rev.*, vol. 6, pp. 688-696, 1941.
- DOYLE, B. W.: *The Etiquette of Race Relations in the South: A Study in Social Control*, University of Chicago Press, Chicago, 1937.
- FARIS, E.: *The Nature of Human Nature, and Other Essays in Social Psychology*, McGraw-Hill, New York, 1937.
- FARIS, R. E. L.: "Sociological Causes of Genius," *Amer. Sociol. Rev.*, vol. 5, pp. 689-697, 1940.
- HOLLINGSHEAD, A. B.: "The Concept of Social Control," *Amer. Sociol. Rev.*, vol. 6, pp. 217-224, 1941.
- HSU, F. L. K.: "Incentives to Work in Primitive Societies," *Amer. Sociol. Rev.*, vol. 8, pp. 638-642, 1943.
- ICHHEISER, G.: "The Image of the Other Man: A Study in Social Psychology," *Sociometry*, vol. 3, pp. 277-291, 1940.
- KARDINER, A., and R. LINTON: *The Individual and His Society*, Columbia University Press, New York, 1939.
- KLUCKHOHN, C., and O. H. MOWER: "Culture and Personality: A Conceptual Scheme," *Amer. Anthropol.*, vol. 46, pp. 1-29, 1945.
- KOLB, W. L.: "A Critical Evaluation of Mead's 'I' and 'Me' Concepts," *Social Forces*, vol. 22, pp. 291-296, 1944.
- LEMERT, E. M.: "The Folkways and Social Control," *Amer. Sociol. Rev.*, vol. 7, pp. 394-399, 1942.
- LINTON, R.: *The Cultural Background of Personality*, Appleton-Century, New York, 1945.
- MEAD, G. H.: *Mind, Self, and Society: From the Standpoint of a Social Behaviorist*, University of Chicago Press, Chicago, 1934.
- RIEMER, S.: "Individual and National Psychology: A Problem in the Army Area Study," *Social Forces*, vol. 22, pp. 256-261, 1944.
- RIEMER, S.: "Personality Structure and Nazi Fiction," *Social Forces*, vol. 24, pp. 32-36, 1945.
- VENABLE, V.: *Human Nature: The Marxian View*, Knopf, New York, 1945.

4. (Cited on p. 100.)

BOWMAN, I.: *Geography in Relation to the Social Sciences*, Scribner, New York, 1934.

CAHNMAN, W. J.: "Concepts of Geopolitics," *Amer. Sociol. Rev.*, vol. 8, pp. 55-62, 1943.

DILL, D. B.: *Life, Heat, and Altitude; Physiological Effects of Hot Climates and Great Heights*, Harvard University Press, Cambridge, 1938.

FORDE, C. D.: *Habitat, Economy and Society: A Geographical Introduction to Ethnology*, 4th ed., Methuen, London, 1942.

GYORGY, A.: *Geopolitics, the New German Science*, University of California Press, Berkeley, 1944.

KROEBER, A. L.: *Cultural and Natural Areas of Native North America*, University of California Press, Berkeley, 1939.

MARETT, J. R.: *Race, Sex, and Environment: A Study of Mineral Deficiency in Human Evolution*, Hutchinson, London, 1936.

MATTEN, J.: *Geopolitik, Doctrine of National Self-sufficiency and Empire*, The Johns Hopkins Press, Baltimore, 1942.

MILLS, C. A.: "Climatic Effects on Growth and Development, with Particular Reference to the Effects of Tropical Residence," *Amer. Anthropol.*, vol. 42, pp. 1-14, 1942.

MUELDER, H. R.: *Years of This Land, a Geographical History of the United States*, Appleton-Century, New York, 1943.

PEATTIE, R.: *Geography in Human Destiny*, 2d ed., Stewart, New York, 1941.

QUINN, J. A.: "Human Ecology and Interactional Ecology," *Amer. Sociol. Rev.*, vol. 5, pp. 713-722, 1940.

RENNER, G. T., et al.: *Global Geography*, Crowell, New York, 1944.

SEMPLE, E. C., and C. F. JONES: *American History and Its Geographic Conditions*, rev. ed., Houghton Mifflin, Boston, 1933.

SHORT, E. H.: *A Handbook of Geopolitics*, P. Allen, London, 1935.

SPYKMAN, N. J.: *America's Strategy in World Politics: The United States and the Balance of Power*, Harcourt, New York, 1942.

SPYKMAN, N. J.: *The Geography of the Peace*, H. R. Nicholl, ed., Harcourt, New York, 1944.

STRAUSZ-HUPÉ, R.: *Geopolitics: The Struggle for Space and Power*, Putnam, New York, 1942.

TAYLOR, T. G.: *Environment and Nation: Geographical Factors in the Cultural and Political History of Europe*, University of Chicago Press, Chicago, 1936.

TAYLOR, T. G.: *Environment, Race, and Migration*, University of Chicago Press, Chicago, 1937.

WEIGERT, H. W.: *German Geopolitics*, Oxford University Press, New York, 1941.

WEIGERT, H. W.: *Generals and Geographers: The Twilight of Geopolitics*, Oxford University Press, New York, 1942.

WHEELER, R. H., and T. GASTON: "The History of Music in Relation to Climatic and Cultural Fluctuations," *Proc. Music Teach. Nat. Ass.*, 1941, pp. 432-438.

WHITBECK, R. H., and V. C. FINCH: *Economic Geography: A Regional Survey*, 4th ed., McGraw-Hill, New York, 1941.

WHITBECK, R. H., and O. J. THOMAS: *The Geographic Factor: Its Role in Life and Civilization*, Appleton-Century, New York, 1932.

WHITE, C. L., and G. T. RENNER: *Geography: An Introduction to Human Ecology*, Appleton-Century, New York, 1936.

WHITTLESLEY, D.: *The Earth and the State: A Study of Political Geography*, Holt, New York, 1939.

5. (Cited on p. 111.)

BENNETT, H. H.: *Soil Conservation*, McGraw-Hill, New York, 1939.

CHASE, S.: *Rich Land, Poor Land: A Study of Waste in the Natural Resources of America*, Whittlesey House, New York, 1936.

- FINK, O. E.: *Conservation for Tomorrow's America*, Ohio Division of Conservation and Natural Resources, Columbus, 1942.
- GLOVER, K.: *America Begins Again: The Conquest of Waste in Our Natural Resources*, Whittlesey House, New York, 1939.
- GUSTAFSON, A. F., et al.: *Conservation in the United States*, Comstock, Ithaca, 1939.
- NATIONAL RESOURCES COMMITTEE: *Regional Factors in National Planning and Development*, Government Printing Office, Washington, D. C., 1935.
- NATIONAL RESOURCES COMMITTEE: *Our Energy Resources*, Government Printing Office, Washington, D. C., 1939.
- OSTROLENK, B.: *Economic Geography*, Irwin, Chicago, 1941.
- PARKINS, A. E., and J. R. WHITAKER, eds.: *Our Natural Resources and Their Conservation*, 2d ed., Wiley, New York, 1939.
- RENNER, G. T.: *Conservation of National Resources*, Wiley, New York, 1942.
- RENNER, G. T.: "Natural Resources in the Post-war World," *Amer. J. Sociol.*, vol. 49, pp. 430-440, 1944.
- ROUSH, G. A.: *Strategic Minerals and World Politics*, McGraw-Hill, New York, 1939.
- SEARS, P. B.: *Deserts on the March*, University of Oklahoma Press, Norman, 1935.
- SHEPARD, W.: *Food or Famine: The Challenge of Erosion*, Macmillan, New York, 1945.
- STANLEY, E.: *Raw Materials in Peace and War*, Council of Foreign Relations, New York, 1937.
- VAN HISE, C. H.: *The Conservation of Our Natural Resources*, L. Havemeyer, ed., rev. ed., Macmillan, New York, 1930.
- WHITNEY, M.: *Soil and Civilization*, Van Nostrand, New York, 1925.
- ZIMMERMANN, E. W.: *World Resources and Industries*, Harper, New York, 1933.
- ZON, R., et al.: *Conservation of Renewable Resources*, University of Pennsylvania Press, Philadelphia, 1941.

6. (Cited on p. 137.)

- BEEBE, G. W.: *Contraception and Fertility in the Southern Appalachians*, Williams & Wilkins, Baltimore, 1942.
- BONSER, H. J.: "A Postwar Population Policy for the Southeast," *Social Forces*, vol. 23, pp. 38-41, 1944.
- BRIERLY, W. B.: "Malaria and Socio-economic Conditions in Mississippi," *Social Forces*, vol. 23, pp. 451-559, 1945.
- CARR-SAUNDERS, A. M.: *World Population*, Clarendon Press, New York, 1936.
- COTTRELL, L. S., Jr.: "Research in Causes of Variations in Fertility: Social Psychological Aspects," *Amer. Sociol. Rev.*, vol. 2, pp. 678-685, 1937.
- DELL, B. N.: *Population, Resources, and Trade*, Little, Boston, 1938.
- FAIRCHILD, H. P.: *People, the Quantity and Quality of Population*, Holt, New York, 1939.
- FAIRCHILD, H. P.: "Postwar Population Problems," *Social Forces*, vol. 23, pp. 1-6, 1944.
- HAUSER, P. M.: "Population," *Amer. J. Sociol.*, vol. 47, pp. 816-828, 1942.
- HIRSCHFELD, G., and C. W. STROW: "Comparative Health Factors among the States," *Amer. Sociol. Rev.*, vol. 11, pp. 42-52, 1946.
- JAFFE, A. J.: "Urbanization and Fertility," *Amer. J. Sociol.*, vol. 48, pp. 48-60, 1942.
- KIRKPATRICK, C.: *Nazi Germany: Its Women and Family Life*, Bobbs-Merrill, Indianapolis, 1938.
- LANDIS, P. H.: *Population Problems*, American Book, New York, 1943.
- LORIMER, F., and F. OSBORN: *Dynamics of Population*, Macmillan, New York, 1934.
- MYRDAL, G.: *Population: A Problem for Democracy*, Harvard University Press, Cambridge, 1940.
- NOTESTEIN, F. W.: "The Decrease in Size of Families from 1890 to 1910," *Milbank Mem. F. Quart. Bull.*, vol. 9, pp. 181-188, 1931.
- REUTER, E. B.: *Population Problems*, Lippincott, Philadelphia, 1937.

- ROSE, A. M.: "A Research Note on the Influence of Immigration on the Birth Rate," *Amer. J. Sociol.*, vol. 47, pp. 614-621, 1942.
- SABAGH, G., and D. S. THOMAS: "Changing Patterns of Fertility and Survival among Japanese Americans on the Pacific Coast," *Amer. Sociol. Rev.*, vol. 10, pp. 651-658, 1945.
- SEWELL, W. H.: "Differential Fertility in Completed Oklahoma Farm Families," *Amer. Sociol. Rev.*, vol. 6, pp. 427-434, 1944.
- SMITH, T. L.: "The Recent Increase of Persons in the Social Security Ages," *Amer. Sociol. Rev.*, vol. 10, pp. 414-418, 1945.
- THOMPSON, W. S.: *Plenty of People*, Cattell, Lancaster, Pa., 1944.
- THOMPSON, W. S.: "Population Studies," *Amer. J. Sociol.*, vol. 50, pp. 436-442, 1945.
- WHITNEY, V. H.: "The Estimation of Populations for Unincorporated Places," *Amer. Sociol. Rev.*, vol. 11, pp. 98-103, 1946.
7. (Cited on p. 185.)
- BURLINGAME, R.: *March of the Iron Men: A Social History of Union through Invention*, Scribner, New York, 1938.
- CHASE, S.: *Men and Machines*, Harper, New York, 1924.
- DANKERT, C. E.: "Labor Immobility and Technological Unemployment," *Social Forces*, vol. 19, pp. 426-434, 1941.
- DAVIS, A.: "Time and the Technicways: An Experiment in Definition," *Social Forces*, vol. 19, pp. 175-189, 1940.
- DAVIS, A. K.: "Veblen on the Decline of the Protestant Ethic," *Social Forces*, vol. 22, pp. 282-286, 1944.
- HARDING, T. S.: "Social Technology and the Courts in Modern Times," *Amer. Sociol. Rev.*, vol. 10, pp. 746-751, 1945.
- HAYES, J. H.: *A Generation of Materialism*, Harper, New York, 1941.
- LEDERER, E.: "Technology," *Encycl. Soc. Sci.*, vol. 14, pp. 553-540.
- MUMFORD, L.: *Technics and Civilization*, Harcourt, New York, 1934.
- NATIONAL RESOURCES COMMITTEE: *The Structure of the American Economy*, Government Printing Office, Washington, D. C., 1939.
- NOURSE, E. G., et al.: *America's Capacity to Produce*, Brookings, Washington, D. C., 1934.
- ODUM, H.: "Notes on the Technicways in Contemporary Society," *Amer. Sociol. Rev.*, vol. 2, pp. 336-346, 1937.
- OSBURN, W. F.: *Living with Machines*, University of Chicago Press, Chicago, 1933.
- OSBURN, W. F.: "The Influence of Inventions on American Social Institutions in the Future," *Amer. J. Sociol.*, vol. 43, pp. 365-376, 1937.
- OSBURN, W. F., and S. C. GILFILLAN: "The Influence of Invention and Discovery," Chap. III of *Recent Social Trends*, McGraw-Hill, New York, 1933.
- PECK, H. W.: "The New Economy and the Machine," *Social Forces*, vol. 22, pp. 47-55, 1943.
- POLAKOV, W. N.: *The Power Age*, Macmillan, New York, 1933.
- RUGG, H. O.: *The Great Technology*, Harcourt, New York, 1933.
- SALTER, J. A.: *Modern Mechanization and Its Effects on the Structure of Society*, Constable, London, 1933.
- SCHNEIDER, J.: "Cultural Lag: What Is It?," *Amer. Sociol. Rev.*, vol. 10, pp. 786-791, 1945.
- SIKES, H.: *Contemporary Economic Systems*, Holt, New York, 1940.
8. (Cited on p. 266.)
- ANDERSON, S.: *Home Town*, Alliance, New York, 1940.
- BAKER, O. E., R. BORSODI, and M. L. WILSON: *Agriculture in Modern Life*, Harper, New York, 1939.
- BARGER, H., and H. H. LANDSBERG: *American Agriculture, 1899-1939: A Study of Output, Employment, and Productivity*, National Bureau of Economic Research, New York, 1942.

- BEERS, H. W., and C. HEFLIN: "The Urban Status of Rural Migrants," *Social Forces*, vol. 23, pp. 32-37, 1944.
- BENNETT, J. W.: "Culture Change and Personality in a Rural Society," *Social Forces*, vol. 23, pp. 123-132, 1944.
- GEE, W.: *The Social Economics of Agriculture*, rev. ed., Macmillan, New York, 1942.
- HOFFSOMMER, H.: "The Relation of the Rural Church to Other Rural Organizations," *Social Forces*, vol. 20, pp. 224-232, 1941.
- HOMANS, G. C.: *English Villagers of the Thirteenth Century*, Harvard University Press, Cambridge, 1941.
- KOLB, J. H., and E. DE S. BRUNNER: *A Study of Rural Society: Its Organization and Changes*, rev. ed., Houghton Mifflin, Boston, 1940.
- LANDIS, P. H.: *Rural Life in Process*, McGraw-Hill, New York, 1940.
- McWILLIAMS, C.: *Small Farm and Big Farm*, Public Affairs Committee, New York, 1945.
- PASSIN, H., and J. W. BENNETT: "Changing Agricultural Magic in Southern Illinois: A Systematic Analysis of Folk-urban Transition," *Social Forces*, vol. 22, pp. 98-106, 1943.
- SANDERSON, D., and R. A. POLSON: *Rural Community Organization*, Wiley, New York, 1939.
- SIMS, N. LER.: *Elements of Rural Sociology*, 3d ed., Crowell, New York, 1940.
- SMITH, T. L.: *The Sociology of Rural Life*, Harper, New York, 1940.
- SOROKIN, P. A., C. C. ZIMMERMANN, and C. J. GALPIN: *A Systematic Source Book in Rural Sociology*, University of Minnesota Press, Minneapolis, 1930.
- TAYLOR, C. C.: *Rural Sociology in Its Economic, Historical, and Psychological Aspects*, rev. ed., Harper, New York, 1933.
- WHITNEY, V. H.: "The Rural-nonfarm Population: Patterns of Growth in a Piedmont Area," *Social Forces*, vol. 24, pp. 81-89, 1945.
9. (Cited on p. 270.)
- ABELL, A. I.: *The Urban Impact on American Protestantism: 1865-1900*, Harvard University Press, Cambridge, 1943.
- BLUMENTHAL, A.: *Small Town Stuff*, University of Chicago Press, Chicago, 1933.
- BURGESS, E. W., ed., *The Urban Community*, University of Chicago Press, Chicago, 1926.
- BUSHEE, F. A.: "The Church in a Small City," *Amer. J. Sociol.*, vol. 49, pp. 223-232, 1943.
- CAPLOW, T.: "Transiency as a Cultural Pattern," *Amer. Sociol. Rev.*, vol. 5, pp. 731-739, 1940.
- CARPENTER, N.: *The Sociology of City Life*, Longmans, New York, 1931.
- GIST, N. P., and L. A. HALBERT: *Urban Society*, Crowell, New York, 1933.
- HAWLEY, A. M.: "An Ecological Study of Urban Service Institutions," *Amer. Sociol. Rev.*, vol. 6, pp. 629-639, 1941.
- HAYNER, N. S.: *Hotel Life*, University of North Carolina Press, Chapel Hill, 1936.
- HOFFER, F. W.: "The Conditioning of Behavior through Structure and Function in an Urban Community," *Social Forces*, vol. 20, pp. 316-321, 1942.
- KINNEMAN, J. A.: "Urbanization as Measured by Hospitalization," *Amer. Sociol. Rev.*, vol. 5, pp. 723-730, 1940.
- KLIGMAN, M.: "Human Ecology and the City Planning Movement," *Social Forces*, vol. 24, pp. 89-95, 1945.
- LEYBURN, J. G.: "Urban Natives in South Africa," *Amer. Sociol. Rev.*, vol. 9, pp. 495-502, 1944.
- LOOMIS, C. P.: "Sociometrics and the Study of New Rural Communities," *Sociometry*, vol. 2, pp. 56-76, 1939.
- LYND, R. S., and H. M. LYND: *Middletown*, Harcourt, New York, 1929.
- LYND, R. S., and H. M. LYND: *Middletown in Transition*, Harcourt, New York, 1937.

- McKENZIE, R. D.: "The Rise of Metropolitan Communities," Chap. IX of *Recent Social Trends*, McGraw-Hill, New York, 1933.
- MUMFORD, L.: *The Culture of Cities*, Harcourt, New York, 1938.
- OGBURN, W. F.: *Social Characteristics of Cities*, University of Chicago Press, Chicago, 1937.
- PARK, R. E., ed.: *The City*, University of Chicago Press, Chicago, 1926.
- QUINN, J. A.: "The Burgess Zonal Hypothesis and Its Critics," *Amer. Sociol. Rev.*, vol. 5, pp. 210-218, 1940.
- TISDALE, H.: "The Process of Urbanization," *Social Forces*, vol. 20, pp. 311-316, 1942.
- WIRTH, L.: "Urbanism as a Way of Life," *Amer. J. Sociol.*, vol. 44, pp. 1-24, 1938.
- WIRTH, L.: "The Urban Society and Civilization," *Amer. J. Sociol.*, vol. 46, pp. 743-755, 1940.
- WIRTH, L.: "The Urban Society and Civilization" in *Eleven Twenty-six: A Decade of Social Science Research*, University of Chicago Press, Chicago, 1940.
10. (Cited on p. 273.)
- ALBIG, W.: *Public Opinion*, McGraw-Hill, New York, 1939.
- ALLARD, W.: "A Test of Propaganda Values in Public Opinion Surveys," *Social Forces*, vol. 20, pp. 206-213, 1941.
- ALLPORT, F. H.: "Polls and the Science of Public Opinion," *Publ. Opin. Quart.*, vol. 4, pp. 249-257, 1940.
- ANON.: "Gallup and Fortune Polls," *Publ. Opin. Quart.*, vol. 4, pp. 533-553; pp. 704-718, 1940.
- ANON.: "Gallup and Fortune Polls," *Publ. Opin. Quart.*, vol. 5, pp. 133-165, 1941.
- BARTLETT, F. C.: *Political Propaganda*, Macmillan, New York, 1940.
- BAVELAS, A.: "A Method for Investigating Individual and Group Ideology," *Sociometry*, vol. 5, pp. 371-377, 1942.
- CANTRIL, H.: *Gauging Public Opinion*, Princeton University Press, Princeton, 1944.
- CARTER, H.: "Recent American Studies in Attitudes toward War: A Summary and Evaluation," *Amer. Sociol. Rev.*, vol. 10, pp. 343-352, 1945.
- CHAPMAN, S. H.: "The Minister: Professional Man of the Church," *Social Forces*, vol. 23, pp. 202-206, 1944.
- CHASE, S.: *The Tyranny of Words*, Harcourt, New York, 1938.
- CHILDS, H. L.: *An Introduction to Public Opinion*, Wiley, New York, 1940.
- CHILDS, H. L., and J. B. WHITTON, eds.: *Propaganda by Short Wave*, Princeton University Press, Princeton, 1942.
- COREY, S. M.: "Professed Attitudes and Actual Behavior," *J. Educ. Psychol.*, vol. 28, pp. 271-280, 1937.
- CROSSER, P. K.: "Ideologies and the American School," *Social Forces*, vol. 19, pp. 195-200, 1940.
- DAY, D. D.: "Methods in Attitude Research," *Amer. Sociol. Rev.*, vol. 5, pp. 395-410, 1940.
- DUNHAM, H. W.: "Topical Summaries of Current Literature: Social Attitudes," *Amer. J. Sociol.*, vol. 46, pp. 344-375, 1940.
- FIREY, W.: "Sentiment and Symbolism as Ecological Variables," *Amer. Sociol. Rev.*, vol. 10, pp. 140-148, 1945.
- GALLUP, G., and S. F. RAE: *The Pulse of Democracy*, Simon and Schuster, New York, 1940.
- GEOGHEGAN, A. T.: *The Attitude towards Labor in Early Christianity and Ancient Culture*, Catholic University of America Press, Washington, D. C., 1945.
- GUTHRIE, E. F.: "Historical Materialism and Its Sociological Critics," *Social Forces*, vol. 20, pp. 172-184, 1941.
- HARTMAN, G. W.: "A Comparison of the Public Attitudes of 711 Eminent Business Executives with Those of 65 Distinguished 'Progressive' Educators," *Psychol. Bull.*, vol. 38, pp. 541, 1941.
- HERMAN, T.: "Pragmatism: A Study in Middle Class Ideology," *Social Forces*, vol. 22, pp. 405-410, 1944.

- HOFFER, C. R.: "A Sociological Analysis of Propaganda," *Social Forces*, vol. 20, pp. 445-448, 1942.
- KATZ, D.: "Three Criteria: Knowledge, Conviction, and Significance," *Publ. Opin. Quart.*, vol. 5, pp. 52-78, 1941.
- LAPIERE, R. T.: "The Sociological Significance of Measurable Attitudes," *Amer. Sociol. Rev.*, vol. 3, pp. 175-182, 1938.
- LAZARSFELD, P. F., B. BERELSON, and H. GAUDET: *The People's Choice*, Duell, New York, 1945.
- LEE, A. McC.: "The Analysis of Propaganda: A Clinical Summary," *Amer. J. Sociol.*, vol. 51, pp. 126-135, 1945.
- LONDON, K.: *Backgrounds of Conflict: Ideas and Forms in World Politics*, Macmillan, New York, 1945.
- McCORMICK, T. C., and R. C. SCHMID: "A System of Attitude Experiments," *Social Forces*, vol. 19, pp. 351-356, 1941.
- MILLER, D. C.: "The Measurement of National Morale," *Amer. Sociol. Rev.*, vol. 6, pp. 487-498, 1941.
- MURPHY, G., and R. LIKERT: *Public Opinion and the Individual*, Harper, New York, 1938.
- NETTLER, G.: "A Test for the Sociology of Knowledge," *Amer. Sociol. Rev.*, vol. 10, pp. 393-399, 1945.
- NETTLER, G.: "The Relationship between Attitude and Information concerning the Japanese in America," *Amer. Sociol. Rev.*, vol. 11, pp. 177-191, 1946.
- NEWCOMB, T. M.: "Community Roles in Attitude Formation," *Amer. Sociol. Rev.*, vol. 7, pp. 621-630, 1942.
- SLETTO, R. F.: "Pretesting of Questionnaires," *Amer. Sociol. Rev.*, vol. 5, pp. 193-200, 1940.
- SMITH, B. L.: "Literature on Propaganda Technique and Public Opinion," *Psychol. Bull.*, vol. 38, pp. 469-483, 1941.
- WALPOLE, H. R.: *Semantics*, Norton, New York, 1941.
- WEAVER, L.: "How Valid is Public Opinion?," *Social Forces*, vol. 20, pp. 341-344, 1942.
11. (Cited on p. 352.)
- ANON.: "Informal Social Organization in the Army," *Amer. J. Sociol.*, vol. 51, pp. 365-370, 1946.
- BAIN, R.: "Sociometry and Social Measurement," *Sociometry*, vol. 6, pp. 206-213, 1943.
- BARKER, R. G.: "The Social Interrelations of Strangers and Acquaintances," *Sociometry*, vol. 5, pp. 169-179, 1942.
- BECKER, H., and R. C. MYERS: "Sacred and Secular Aspects of Human Sociation," *Sociometry*, vol. 5, pp. 207-229, 1942.
- BECKER, H., and R. C. MYERS: "Sacred and Secular Aspects of Human Sociation," *Sociometry*, vol. 5, pp. 355-370, 1942.
- DODD, S. C.: "Sociometry Delimited: Its Relation to Social Work, Sociology, and the Social Sciences," *Sociometry*, vol. 6, pp. 200-205, 1943.
- JENNINGS, H. H.: "Sociometry and Social Theory," *Amer. Sociol. Rev.*, vol. 6, pp. 512-522, 1941.
- JENNINGS, H. H.: *Leadership and Isolation*, Longmans, New York, 1943.
- LOOMIS, C. P.: "Informal Groupings in a Spanish-American Village," *Sociometry*, vol. 4, pp. 36-51, 1941.
- LUNDBERG, G. A.: "Social Attraction-patterns in a Rural Village: A Preliminary Report," *Sociometry*, vol. 1, pp. 77-80, 1937.
- LUNDBERG, G. A.: "Discussion of Sociometry," *Sociometry*, vol. 6, pp. 219-220, 1943.
- LUNDBERG, G. A., and M. LAWSING: "The Sociography of Some Community Relations," *Amer. Sociol. Rev.*, vol. 2, pp. 318-335, 1937.
- LUNDBERG, G. A., and M. STEELE: "Social Attraction-patterns in a Village," *Sociometry*, vol. 1, pp. 375-419, 1938.

- MORENO, F.: "Sociometric Status of Children in a Nursery School Group," *Sociometry*, vol. 5, pp. 395-411, 1942.
- MORENO, J. L.: *Who Shall Survive? A New Approach to the Problem of Human Relations*, Nervous and Mental Diseases Publishing Company, Washington, D. C., 1934.
- MORENO, J. L.: "Foundations of Sociometry, an Introduction," *Sociometry*, vol. 4, pp. 15-35, 1941.
- MORENO, J. L.: "Sociometry and the Cultural Order," *Sociometry*, vol. 6, pp. 299-344, 1943.
- NORTHWAY, M. L.: "Social Relationships among Preschool Children: Abstracts and Interpretation of Three Studies," *Sociometry*, vol. 6, pp. 429-433, 1943.
- SWEETSER, F. L., JR.: "A New Emphasis for Neighborhood Research," *Amer. Sociol. Rev.*, vol. 7, pp. 525-533, 1942.
- TATE, L. B.: "The Role of Informal Activities in Community Life," *Amer. Sociol. Rev.*, vol. 10, pp. 158-160, 1945.
- TRAVERS, R. M. W.: "Group Identification as Factors Influencing Judgments of the Opinion of a More General Population," *Sociometry*, vol. 5, pp. 272-278, 1942.
- VREELAND, F. McL.: "Social Relations in the College Fraternity," *Sociometry*, vol. 5, pp. 151-162, 1942.
- ZELENY, L. D.: "Sociometry of Morale," *Amer. Sociol. Rev.*, vol. 4, pp. 799-808, 1939.
- ZNANIECKI, F.: "Sociometry and Sociology," *Sociometry*, vol. 6, pp. 225-233, 1943.
12. (Cited on p. 377.)
- BATES, A.: "Parental Roles in Courtship," *Social Forces*, vol. 20, pp. 483-486, 1942.
- BURGESS, E. W., and L. S. COTTRELL, JR.: *Predicting Success or Failure in Marriage*, Prentice-Hall, New York, 1939.
- BURGESS, E. W., and P. WALLIN: "Predicting Adjustment in Marriage from Adjustment in Engagement," *Amer. J. Sociol.*, vol. 49, pp. 324-330, 1943.
- BURGESS, E. W., and P. WALLIN: "Homogamy in Social Characteristics," *Amer. J. Sociol.*, vol. 49, pp. 109-124, 1943.
- BURMA, J. H.: "Attitudes of College Youth on War Marriage," *Social Forces*, vol. 24, pp. 96-100, 1945.
- FRAZIER, E. F.: *The Negro Family in the United States*, University of Chicago Press, Chicago, 1939.
- GLICK, P. C.: "Family Trends in the United States, 1890 to 1940," *Amer. Sociol. Rev.*, vol. 7, pp. 505-516, 1942.
- GROVES, E. R.: *Marriage*, Holt, New York, 1941.
- GROVES, E. R.: "Professional Training for Marriage and Family Counseling," *Social Forces*, vol. 23, pp. 447-451, 1945.
- HART, H., and H. BOWNE: "Divorce, Depression, and War," *Social Forces*, vol. 22, pp. 191-194, 1943.
- HUGHES, E. C.: "The Study of Institutions," *Social Forces*, vol. 20, pp. 307-310, 1942.
- LEEY, L. R.: "Contrasts in Urban and Rural Family Life," *Amer. Sociol. Rev.*, vol. 5, pp. 948-953, 1940.
- MCCORMICK, T. C., and B. E. MACRORY: "Group Values in Mate Selection, in a Sample of College Girls," *Social Forces*, vol. 22, pp. 315-317, 1944.
- MCCORMICK, T. C., and D. W. OBERDORFER: "Marriage and Divorce Rates in Wisconsin, 1920-35," *Amer. J. Sociol.*, vol. 47, pp. 563-574, 1942.
- MONAHAN, T. P.: "The Changing Probability of Divorce," *Amer. Sociol. Rev.*, vol. 5, pp. 536-545, 1940.
- MOWRER, H. R.: *Personality Adjustment and Domestic Discord*, American Book, New York, 1935.
- NEELEY, W. C.: "Family Attitudes of Denominational College and University Students, 1929 and 1936," *Amer. Sociol. Rev.*, vol. 5, pp. 512-522, 1940.
- QUEEN, S. A., and J. R. GRUENER: "Social Pathology: Obstacles to Social Participation," *Amer. Sociol. Rev.*, vol. 6, pp. 307-316, 1940.

- STOUFFER, S. A., and L. M. SPENCER: "Recent Increases in Marriage and Divorce," *Amer. J. Sociol.*, vol. 44, pp. 551-554, 1939.
- WIEMAN, R. W.: *The Modern Family and the Church*, Harper, New York, 1937.
- WILE, S., and M. D. WINN: *Marriage in the Modern Manner*, Appleton-Century, New York, 1936.
- WINCH, R. E.: "Personality Characteristics of Engaged and Married Couples," *Amer. J. Sociol.*, vol. 46, pp. 686-697, 1941.

13. (Cited on p. 435.)

- ALLPORT, G. W., ed.: "Controlling Group Prejudice," *The Annals*, March, 1946.
- BLOOM, L., and R. RIEMER: "Attitudes of College Students toward Japanese-Americans," *Sociometry*, vol. 8, pp. 157-173, 1945.
- BLUMER, H.: *Race Prejudice*, Publications in Social Process, University of Hawaii, Honolulu, T. H., 1940.
- CLARK, K. B., and M. K. CLARK: "Skin Color as a Factor in Racial Identification of Negro Preschool Children," *J. Soc. Psychol.*, vol. 11, pp. 159-169, 1940.
- COX, O. C.: "Race Prejudice and Intolerance—a Distinction," *Social Forces*, vol. 24, pp. 216-219, 1945.
- GLICK, C.: "The Relation between Position and Status in the Assimilation of Chinese in Hawaii," *Amer. J. Sociol.*, vol. 47, pp. 667-679, 1942.
- HARTLEY, E.: *Problems in Prejudice*, Columbia University Press, New York, 1946.
- HAYNES, G. E.: "Public Approbation as a Means of Changing Interracial Attitudes and Customs," *Social Forces*, vol. 24, pp. 105-110, 1945.
- HILL, M. C.: "Social Status and Physical Appearance among Negro Adolescents," *Social Forces*, vol. 22, pp. 443-448, 1944.
- MCWILLIAMS, C.: *Prejudice. Japanese-Americans: Symbol of Racial Intolerance*, Little, Boston, 1944.
- O'BRIEN, R. W.: "Selective Dispersion as a Factor in the Solution of the Nisei Problem," *Social Forces*, vol. 23, pp. 140-147, 1944.
- PARSONS, T.: "The Sociology of Modern Anti-Semitism," in *Jews in a Gentile World*, I. GRAEBER and S. H. BRITT, eds., Macmillan, New York, 1942.
- POWDERMAKER, H.: *Probing Our Prejudices*, Harper, New York, 1944.
- ROBINSON, D., and S. ROHDE: "A Public Opinion Study of Anti-Semitism in New York City," *Amer. Sociol. Rev.*, vol. 10, pp. 511-515, 1945.
- ROGLER, C. C.: "The Role of Semantics in the Study of Race Distance in Puerto Rico," *Social Forces*, vol. 22, pp. 448-453, 1944.
- SAMUELSON, B.: "Mrs. Jones's Ethnic Attitudes: A Ballot Analysis," *J. Abnorm. Soc. Psychol.*, vol. 40, pp. 205-215, 1945.
- SIEGEL, M.: "'Horns, Tails, and Easter Sport': A Study of a Stereotype," *Social Forces*, vol. 20, pp. 382-386, 1942.
- STRONG, S. M.: "Observations on the Possibility of Attitude Modification: A Case of Nationality and Racial Group Interrelationships in Wartime," *Social Forces*, vol. 22, pp. 323-331, 1944.

14. (Cited on p. 448.)

- BLOOM, L.: "Role of the Indian in the Race Relations Complex of the South," *Social Forces*, vol. 19, pp. 268-273, 1940.
- BROWN, W. O.: "Role of the Poor Whites in Race Contacts of the South," *Social Forces*, vol. 19, pp. 258-268, 1940.
- CHADBURN, J. H.: *Lynching and the Law*, University of North Carolina Press, Chapel Hill, 1933.
- COON, C. S.: *The Races of Europe*, Macmillan, New York, 1939.
- DRAKE, S., and H. R. CAYTON: *Black Metropolis*, Harcourt, New York, 1945.
- GILMORE, H., and L. WILSON: "The Employment of Negro Women as Domestic Servants in New Orleans," *Social Forces*, vol. 22, pp. 318-323, 1944.
- HERSKOVITS, K. J.: *The Myth of the Negro Past*, Harper, New York, 1941.

- HERTZ, H., and S. W. LITTLE: "Unmarried Negro Mothers in a Southern Urban Community," *Social Forces*, vol. 23, pp. 73-79, 1944.
- HUMPHREY, N. D.: "American Race Relations and the Caste System," *Psychiatry*, vol. 8, pp. 379-381, 1945.
- JOHNSON, C. S.: "The Present Status of Race Relations in the South," *Social Forces*, vol. 23, pp. 27-32, 1944.
- JOHNSON, G. B.: "Personality in a White-Indian-Negro Community," *Amer. Sociol. Rev.*, vol. 4, pp. 516-523, 1939.
- LINTON, R., ed.: *Acculturation in Seven American Indian Tribes*, Appleton-Century, New York, 1940.
- LOCKE, A., and B. J. STERN, eds.: *When Peoples Meet: A Study of Race and Culture Contacts*, Progressive Education Association, New York, 1941.
- MALINOWSKI, B.: "The Pan-African Problem of Culture Contact," *Amer. J. Sociol.*, vol. 47, pp. 649-665, 1943.
- MARCSON, S.: "The Control of Ethnic Conflict," *Social Forces*, vol. 24, pp. 161-165, 1945.
- MURRAY, F.: "The Negro and Civil Liberties during World War II," *Social Forces*, vol. 24, pp. 211-216, 1945.
- NISBET, R. A.: "The Coming Problem of Assimilation," *Amer. J. Sociol.*, vol. 50, pp. 261-270, 1945.
- ODUM, H. W.: *Race and Rumors of Race*, University of North Carolina Press, Chapel Hill, 1943.
- PALMER, E. N.: "Negro Secret Societies," *Social Forces*, vol. 23, pp. 207-212, 1944.
- POWDERMAKER, H.: *After Freedom: A Cultural Study in the Deep South*, Viking, New York, 1939.
- REUTER, E. B.: *Race Mixture*, McGraw-Hill, New York, 1931.
- STRONG, D. S.: *Organized Anti-Semitism in America*, American Council on Public Affairs, Washington, D. C., 1941.
- TUMIN, M.: "Some Fragments from the Life History of a Marginal Man," *Character & Pers.*, vol. 13, pp. 261-296, 1945.
- WHEETEN, N. L., and A. W. GREEN: *Ethnic Group Relations in a Rural Area of Connecticut*, University of Connecticut Press, Storrs, Conn., 1943.
- WIRTH, L.: "Education for Survival: The Jews," *Amer. J. Sociol.*, vol. 48, pp. 682-691, 1943.
15. (Cited on p. 451.)
- BENOIT-SMULYAN, E.: "Status, Status Types, and Status Interrelations," *Amer. Sociol. Rev.*, vol. 9, pp. 151-161, 1944.
- CLARK, S. D.: "The Religious Sects in Canadian Politics," *Amer. J. Sociol.*, vol. 51, pp. 207-216, 1945.
- COX, O. C.: "Race and Caste: A Distinction," *Amer. J. Sociol.*, vol. 50, pp. 360-368, 1945.
- DANIEL, V. E.: "Ritual and Stratification in Chicago Negro Churches," *Amer. Sociol. Rev.*, vol. 7, pp. 352-361, 1942.
- DAVIS, A.: "American Status Systems and the Socialization of the Child," *Amer. Sociol. Rev.*, vol. 6, pp. 345-354, 1941.
- DAVIS, K.: "A Conceptual Analysis of Stratification," *Amer. Sociol. Rev.*, vol. 7, pp. 309-321, 1942.
- HUGHES, E. C.: "Institutional Office and the Person," *Amer. J. Sociol.*, vol. 43, pp. 404-414, 1937.
- HUGHES, E. C.: "Dilemmas and Contradictions of Status," *Amer. J. Sociol.*, vol. 50, pp. 353-359, 1945.
- LEDERER, E.: *State of the Masses, the Threat of the Classless Society*, Norton, New York, 1940.
- LUNDBERG, G. A.: "The Measurement of Socioeconomic Status," *Amer. Sociol. Rev.*, vol. 5, pp. 29-39, 1940.

- LUNDBERG, G. A., and P. FRIEDMAN: "A Comparison of Three Measures of Socio-economic Status," *Rur. Sociol.*, vol. 8, pp. 227-236, 1943.
- MERTON, R. K.: "Bureaucratic Structure and Personality," *Social Forces*, vol. 18, pp. 1-10, 1940.
- MERTON, R. K.: "Role of the Intellectual in Public Bureaucracy," *Social Forces*, vol. 23, pp. 405-415, 1945.
- MOORE, W. E., and R. M. WILLIAMS: "Stratification in the Ante-bellum South," *Amer. Sociol. Rev.*, vol. 7, pp. 343-351, 1942.
- NEUGARTEN, B. L.: "Social Class and Friendship among School Children," *Amer. J. Sociol.*, vol. 51, pp. 305-313, 1946.
- OLCOTT, M.: "The Caste System in India," *Amer. Sociol. Rev.*, vol. 9, pp. 648-657, 1944.
- O'MALLEY, L. S. S.: *Indian Caste Customs*, Cambridge University Press, London, 1932.
- OPLER, M. K.: "Woman's Social Status and the Forms of Marriage," *Amer. J. Sociol.*, vol. 49, pp. 125-146, 1943.
- PARSONS, T.: "Age and Sex in the Social Structure of the United States," *Amer. Sociol. Rev.*, vol. 7, pp. 604-616, 1942.
- STERN, B. J.: "Soviet Policy on National Minorities," *Amer. Sociol. Rev.*, vol. 9, pp. 229-235, 1944.
- STRONG, S. M.: "Social Types in a Minority Group: Formation of a Method," *Amer. J. Sociol.*, vol. 48, pp. 563-573, 1943.
- USEEM, J., P. TANGENT, and R. USEEM: "Stratification in a Prairie Town," *Amer. Sociol. Rev.*, vol. 7, pp. 331-342, 1942.
- WHITE, R. C.: "Low-income Classes," *Amer. J. Sociol.*, vol. 47, pp. 918-929, 1942.

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